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Subject:

F33601-00-D-J010 / F33601-97-R-9019

FOIA Control Number: 03-438LK

Date Reproduced: 31 Jan 03

SOLICITATION/CONTRACT

BIDDER/OFFEROR TO COMPLETE BLOCKS 11, 13, 15, 21, 22, & 27.

SAH Y Z

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING	PAGE 1 OF 21
	DO S10	

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. SOLICITATION NUMBER	5. SOLICITATION TYPE	6. SOLICITATION ISSUE DATE
F33601-00-DJ010	1 MAY 00	F33601-97-R-9019	[ ] SEALED BIDS (IFB) [X] NEGOTIATED (RFP)	1999 NOV 16

7. ISSUED BY CODE F33601

DEPARTMENT OF THE AIR FORCE
ASC/PKWOV AREA C BLDG 1 RM 109
1940 ALLBROOK DRIVE STE 3
WRIGHT-PATTERSON AFB OH 45433-5309
BUYER: S. HALL/PKWOV/[937]257-5841, X 4198 NO COLLECT CALLS
CO:M. HART/PKWOV/937-257-6147 E MAIL: MADONNA.HART@WPAFB.AF.MIL

8. THIS ACQUISITION IS

[X] UNRESTRICTED
[ ] SET ASIDE: % FOR
[ ] SMALL BUSINESS
[ ] LABOR SURPLUS AREA CONCERNS
[ ] COMBINED SMALL BUSINESS & LABOR SURPLUS AREA CONCERNS
[ ] OTHER

SIC: 8731 SIZE STANDARD: 1000

9. SOLICITATION: SEALED OFFERS WILL BE RECEIVED AT THE ISSUING OFFICE UNTIL 02:00 PM ON 2000 JAN 04
LATE OFFERS ARE SUBJECT TO LATE PROPOSAL PROVISIONS INCORPORATED HEREIN. ALL OFFERS ARE
SUBJECT TO SUCH PROVISIONS, REPRESENTATIONS, CERTIFICATIONS AND SPECIFICATIONS AS ARE ATTACHED OR
INCORPORATED BY REFERENCE.

10. ITEMS TO BE PURCHASED (BRIEF DESCRIPTION)

[ ] SUPPLIES [X] SERVICES MAINTAIN/OPERATE LANDING GEAR TEST FACILITY

11. IF OFFER IS ACCEPTED BY THE GOVERNMENT WITHIN CALENDAR DAYS
* (60 CALENDAR DAYS UNLESS OFFEROR INSERTS A DIFFERENT PERIOD) FROM THE DATE SET FORTH IN BLK 9 ABOVE, THE CONTRACTOR AGREES TO HOLD ITS OFFERED PRICES FIRM FOR THE ITEMS SOLICITED HEREIN AND TO ACCEPT ANY RESULTING CONTRACT SUBJECT TO THE TERMS AND CONDITIONS STATED HEREIN.

12. ADMINISTERED BY CODE

SEE BLOCK 7

SCD: C

13. CONTRACTOR OFFEROR CODE 923259L FACILITY CODE

VERIDIAN ENGINEERING, INC.
4455 GENESEE ST.
P.O. BOX 400
BUFFALO NY 14225

LOCAL OFFICE: VERIDIAN ENGINEERING, INC. (BEVERLY PEASO)
5200 SPRINGFIELD PIKE, STE. 200
DAYTON OH 45431-1289
937-476-2655

14. PAYMENT WILL BE MADE BY CODE F0300

DFAS-DY/FPD
1050 FORRER BLVD.
DAYTON OH 45420-1472

SUBMIT INVOICES TO ADDRESS SHOWN IN CLAUSE G-1

15. PROMPT PAY DISCOUNT

16. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: 10 USC 2304 [ ](c)( ) 41 USC 253 [ ](c)( )

17. ITEM NO.	18. SCHEDULE OF SUPPLIES/SERVICES	19. QUANTITY	20. UNIT	21. UNIT PRICE	22. AMOUNT
	ENTER PRICES IN SECTION B USE TYPEWRITER OR BLACK INK				
	* THE ACCEPTANCE PERIOD IN BLOCK 11 ABOVE IS HEREBY CHANGED FROM 60 TO 120 CALENDAR DAYS.				

23. ACCOUNTING AND APPROPRIATION DATA

SEE SECTION G

24. TOTAL AWARD AMOUNT (FOR GOVT USE ONLY)
CEILING
1,983,282.20

25. [X] CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 1 COPY TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY CONTINUATION SHEETS SUBJECT THE TERMS AND CONDITIONS SPECIFIED HEREIN.

26. [X] AWARD OF CONTRACT: YOUR OFFER ON SOLICITATION NUMBER SHOWN IN BLOCK 4 INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HERIN, IS ACCEPTED AS TO ITEMS: CLINS 0001-0005

27. SIGNATURE OF OFFEROR/CONTRACTOR: Arthur J. Dobzelecki

28. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER): Madonna J. Hart

NAME AND TITLE OF SIGNER (TYPE OR PRINT)	DATE SIGNED	NAME OF CONTRACTING OFFICER	DATE SIGNED
Arthur J. Dobzelecki, V.P.	12 April 2000	MADONNA J. HART	26 Apr 00

1447-101

STANDARD FORM 1447 (5/88)
Prescribed by GSA FAR (48 CFR 53.215-1(c))

PART I - THE SCHEDULE
SECTION B
SUPPLIES OR SERVICE AND PRICES/COSTS

BASE PERIOD: 01 MAY 2000 - 30 SEP 2000

0001 NON-PERSONAL SERVICES TO PROVIDE ALL PERSONNEL, EQUIPMENT, TOOLS, MATERIALS, SUPERVISION AND OTHER ITEMS NECESSARY TO PERFORM OPERATION AND MAINTENANCE OF THE LANDING GEAR DEVELOPMENT AND TEST FACILITY INCLUDING MINOR FACILITY UPGRADING AS DEFINED IN THE PERFORMANCE WORK STATEMENT (PWS) OF EXPERIMENTAL PROCESSING, AND TEST EQUIPMENT IN SUPPORT OF THE RESEARCH. (CONTRACT SERVICES INCLUDE LABOR - SEE EXHIBIT 1 FOR FIXED RATE CHART OF LABOR CATEGORIES).

TOTAL ESTIMATED PRICE, BASE YEAR (OBTAINED FROM EXHIBIT 1) $1,983,282.20

OPTION PERIOD I: 01 OCT 2000 - 30 SEP 2001

0002 NON-PERSONAL SERVICES TO PROVIDE ALL PERSONNEL, EQUIPMENT, TOOLS, MATERIALS, SUPERVISION AND OTHER ITEMS NECESSARY TO PERFORM OPERATION AND MAINTENANCE OF THE LANDING GEAR DEVELOPMENT AND TEST FACILITY INCLUDING MINOR FACILITY UPGRADING AS DEFINED IN THE PERFORMANCE WORK STATEMENT (PWS) OF EXPERIMENTAL PROCESSING, AND TEST EQUIPMENT IN SUPPORT OF THE RESEARCH. (CONTRACT SERVICES INCLUDE LABOR - SEE EXHIBIT 1 FOR FIXED RATE CHART OF LABOR CATEGORIES).

TOTAL ESTIMATED PRICE, OPTION PERIOD I (OBTAINED FROM EXHIBIT 1) $3,840,634.80

OPTION PERIOD II: 01 OCT 2001 - 30 SEP 2002

0003 NON-PERSONAL SERVICES TO PROVIDE ALL PERSONNEL, EQUIPMENT, TOOLS, MATERIALS, SUPERVISION AND OTHER ITEMS NECESSARY TO PERFORM OPERATION AND MAINTENANCE OF THE LANDING GEAR DEVELOPMENT AND TEST FACILITY INCLUDING MINOR FACILITY UPGRADING AS DEFINED IN THE PERFORMANCE WORK STATEMENT (PWS) OF EXPERIMENTAL PROCESSING, AND TEST EQUIPMENT IN SUPPORT OF THE RESEARCH. (CONTRACT SERVICES INCLUDE LABOR - SEE EXHIBIT 1 FOR FIXED RATE CHART OF LABOR CATEGORIES).

TOTAL ESTIMATED PRICE, OPTION PERIOD II (OBTAINED FROM EXHIBIT 1) $3,872,066.40

OPTION PERIOD III: 01 OCT 2002 - 30 SEP 2003

0004 NON-PERSONAL SERVICES TO PROVIDE ALL PERSONNEL, EQUIPMENT, TOOLS, MATERIALS, SUPERVISION AND OTHER ITEMS NECESSARY TO PERFORM OPERATION AND MAINTENANCE OF THE LANDING GEAR DEVELOPMENT AND TEST FACILITY INCLUDING MINOR FACILITY UPGRADING AS DEFINED IN THE PERFORMANCE WORK STATEMENT (PWS) OF EXPERIMENTAL PROCESSING, AND TEST EQUIPMENT IN SUPPORT OF THE RESEARCH. (CONTRACT SERVICES INCLUDE LABOR - SEE EXHIBIT 1 FOR FIXED RATE CHART OF LABOR CATEGORIES).

TOTAL ESTIMATE, OPTION PERIOD III (OBTAINED FROM EXHIBIT 1)	$3,907,012.80

OPTION PERIOD IV: 01 OCT 2003 - 30 SEP 2004

0005 NON-PERSONAL SERVICES TO PROVIDE ALL PERSONNEL, EQUIPMENT, TOOLS, MATERIALS, SUPERVISION AND OTHER ITEMS NECESSARY TO PERFORM OPERATION AND MAINTENANCE OF THE LANDING GEAR DEVELOPMENT AND TEST FACILITY INCLUDING MINOR FACILITY UPGRADING AS DEFINED IN THE PERFORMANCE WORK STATEMENT (PWS) OF EXPERIMENTAL PROCESSING, AND TEST EQUIPMENT IN SUPPORT OF THE RESEARCH. . (CONTRACT SERVICES INCLUDE LABOR - SEE EXHIBIT 1 FOR FIXED RATE CHART OF LABOR CATEGORIES).

TOTAL ESTIMATE, OPTION PERIOD IV (OBTAINED FROM EXHIBIT 1)	$3,934,930.40

GRAND TOTAL (BASE PLUS OPTION YEARS I, II, III, AND IV)	$17,537,926.60

B-1. **CLAUSES AND PROVISIONS**

(a) Clauses and provisions from the Federal Acquisition Regulation (FAR) and supplements thereto are incorporated in this document by reference and in full text. Those incorporated by reference have the same force and effect as if they were given in full text.

(b) Clauses and provisions in this document will be numbered in sequence, but will not necessarily appear in consecutive order.

(c) **Sections K, L and M will be physically removed from any resultant award, but will be deemed to be incorporated, by reference, in that award.**

PART I - THE SCHEDULE
SECTION C
DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C-205. **252.211-7005 SUBSTITUTIONS FOR MILITARY OR FEDERAL SPECIFICATIONS AND STANDARDS** AUG 1997
(IAW DFARS 211.273-4)

(d) (Offeror Insert Information for Each SPI Process)

SPI Process: N/A

Facility:

Military or Federal Specification or Standard:

Affected Contract Line Item and Subline Item Number and Requirement Citation:

Cognizant Administrative Contracting Officer:

C-551 **INCORPORATION OF REFERENCE DOCUMENTS**

All specifications, exhibits, drawings or other documents which are referred to in this contract, whether or not attached, are incorporated herein by reference.

PART I - THE SCHEDULE
SECTION E
INSPECTION AND ACCEPTANCE

E-7. **52.246-6 INSPECTION--TIME-AND-MATERIAL AND LABOR-HOUR** JAN 1986
(IAW FAR 46.306)

E-35 **DD FORM 1423 DATA INSPECTION AND ACCEPTANCE**
(IAW FAR 46.401(b) and 46.503)
The Inspection and Acceptance for Data items are as shown on DD Form 1423 attached hereto.

E-41. **INSPECTION AND ACCEPTANCE**
(IAW FAR 46.401(b), and 46.503)

Inspection and acceptance of the (Services/Supplies) will be performed at **Building 20031 (Landing Gear Test Facility)** by **AFRL/VACM**.

PART I - THE SCHEDULE
SECTION F
DELIVERIES OR PERFORMANCE

F-12. **PERIOD OF PERFORMANCE**
(IAW FAR 11.401(a))

Performance under this contract shall be from **1 May 2000** through **30 Sep 2000**.

F-13. **PLACE OF PERFORMANCE**
(IAW FAR 11.401(a))

Services under this contract are required to be performed at the following location(s): **Bldg 20031, Wright-Patterson AFB, OH and other off-site locations as stated in PWS paragraph 1.1.**

Wright-Patterson AFB, OH.

F-26. **52.242-15 STOP-WORK ORDER** AUG 1989
(IAW FAR 42.1305(b)(1))

F-68. **52.247-55 F.O.B. POINT FOR DELIVERY OF GOVERNMENT-FURNISHED PROPERTY** APR 1984
(IAW FAR 47.305-12(a)(2))

F-477. **5352.247-9017 F.O.B. POINT FOR DELIVERY OF GOVERNMENT-FURNISHED PROPERTY (AFMC)** SEP 1998
(IAW AFMCFARS 5347.305-12(a)(90))

The f.o.b. point for delivery of Government-furnished property, as defined in FAR 52.247-55, F.o.b. Point of Delivery of Government-Furnished Property, shall be: **Bldg. 20031, Landing Gear Test Facility, Wright-Patterson AFB, OH**

PART I - THE SCHEDULE
SECTION G
CONTRACT ADMINISTRATION DATA

G-1. **ACCOUNTING AND APPROPRIATION DATA**

CONTRACTOR: INVOICES SHOULD BE PREPARED IN ACCORDANCE WITH FAR PART 32 PAYMENTS CLAUSES. INVOICES SHOULD CITE THE CONTRACT NUMBER AND LIST APPLICABLE CONTRACT LINE ITEM NUMBERS AND ASSOCIATED CHARGES.

SEND INVOICES TO THE ADDRESS LISTED BELOW:

AFRL/VACM
1981 Fifth Street
Wright-Patterson AFB, OH 45433-7202

FUNDS WILL BE ADDED BY DELIVERY ORDER OR TASK ORDER

G-445. **5352.237-9002 CONTRACT HOLIDAYS (AFMC)** JUL 1997
(IAW AFMCFARS 5337.110-90(c))

(a) The prices/costs in Section B of the contract include holiday observances; accordingly, the Government will not be billed for such holidays, except when services are required by the Government and are actually performed on a holiday. Holidays in addition to those reflected in this contract, which are designated by the Government, will be billable provided the assigned Contractor employee was available for performance and was precluded from such performance.

(b) The following days are contract holidays: **New Year's Day, Martin Luther King Jr's Birthday, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day.**

NOTE: These are the ten (10) Government recognized holidays. The Department of Labor Wage Determination allows for 11 holidays for Service Contract (SCA) covered employees. Because certain SCA recognized holidays (such as Good Friday) are not recognized as Government holidays, it is expected that facilities requiring service of the contractor on that day receive such services. The contractor may substitute another day (e.g. birthday, anniversary, or other day of preference) for that SCA recognized holiday for its' SCA covered employees.

PART I - THE SCHEDULE
SECTION H
SPECIAL CONTRACT REQUIREMENTS

H-91. **WAGE DETERMINATION**
(IAW FAR 22.1012-1)

Service Contract Act Wage Determination Nr **94-2419 REV (14)**, dated **05-27-1999**, is attached hereto and made a part hereof.

H-526 **OPTION TO EXTEND SERVICES**
(PKW 96-106)

The Contracting Officer may provide written notice to the contractor extending the period of performance of the contract for an aggregate period not to exceed 6 months in accordance with contract clause I-194, Option To Extend Services, no less than 14 calendar days prior to the expiration of the contract. The contract extension shall be at the rates specified in the contract schedule for the period of performance immediately preceding the extension, adjusted only as allowed by I-194.

H-568 **MATERIAL AND SUBCONTRACTED SERVICES HANDLING CHARGES**

The price to be paid by the Government for material handling and/or subcontracted services is subject to audit and may be negotiated between the contractor and the Administrative Contracting Officer (ACO) following any audit(s) performed in accordance with the contract clause entitled "Payments Under Time-and-Material and Labor-Hour Contracts" under time and materials and labor hour contracts. The percentages below are ceiling rates and shall not be exceeded.

(a) Materials Handling:

(b) Subcontracted Services:

(c) General and Administrative:

Note: G&A expenses are allowed only to the extent that they are not included in the material handling rate and are applied in accordance with the contractor's usual accounting practices consistent with Subpart 31.2 of the FAR.

PART II - CONTRACT CLAUSES
SECTION I
CONTRACT CLAUSES

FAR **52.252-2** **CLAUSES INCORPORATED BY REFERENCE** FEB 1998
(IAW FAR 52.107(b))

The full text of a clause may be accessed electronically at this/these address(es):
Regulations URLs: (Click on the appropriate regulation.)
http://farsite.hill.af.mil/reghtml/far/far1toc.htm
http://farsite.hill.af.mil/reghtml/dfars/dfar1toc.htm
http://farsite.hill.af.mil/reghtml/affars/affar1toc.htm
http://farsite.hill.af.mil/reghtml/afmcfars/afmc1toc.htm

NOTE: After selecting the appropriate regulation above, at the "Table of Contents" page conduct a search for the desired regulation reference, using your browser's **FIND** function. When located, click on the **regulation reference** (hyperlink).

NO.	FAR PARA	CLAUSE TITLE	DATE
I-11.	**52.202-1**	**DEFINITION** (IAW FAR 2.201)	OCT 1995
I-19.	**52.203-3**	**GRATUITIES** (IAW FAR 3.202)	APR 1984
I-20.	**52.203-5**	**COVENANT AGAINST CONTINGENT FEES** (IAW FAR 3.404)	APR 1984
I-21.	**52.203-6**	**RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT** (IAW FAR 3.503-2)	JUL 1995
I-22.	**52.203-7**	**ANTI-KICKBACK PROCEDURES** (IAW FAR 3.502-3)	JUL 1995
I-23.	**52.203-8**	**CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY** (IAW FAR 3.104-9(a))	JAN 1997
I-25.	**52.203-10**	**PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY** (IAW FAR 3.104-9(b))	JAN 1997
I-25C.	**52.203-12**	**LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS** (IAW FAR 3.808(b))	JUN 1997
I-39.	**52.204-4**	**PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER** (IAW FAR 4.304)	JUN 1996

I-78.	52.209-6	**PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT** (IAW FAR 9.409(b))	JUL 1995
I-102.	52.211-15	**DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS** (IAW FAR 11.604(b))	SEP 1990
I-128.	52.215-2	**AUDIT AND RECORDS—NEGOTIATION** (IAW FAR 15.209(b)(1))	JUN 1999
I-129G.	52.215-8	**ORDER OF PRECEDENCE UNIFORM CONTRACT FORMAT** (IAW FAR 15.209(h))	OCT 1997
I-134C.	52.215-11	**PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA–MODIFICATIONS** (IAW FAR 15.408(c))	OCT 1997
I-136C.	52.215-13	**SUBCONTRACTOR COST OR PRICING DATA–MODIFICATIONS** (IAW FAR 15.408(e))	OCT 1997
I-139C.	52.215-15	**TERMINATION OF DEFINED BENEFIT PENSION PLANS** (IAW FAR 15.408(g))	OCT 1997
I-146C.	52.215-18	**REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS** (IAW FAR 15.408(j))	OCT 1997
I-153.	52.216-7	**ALLOWABLE COST AND PAYMENT** (IAW FAR 16.307(a)(1))	APR 1998

I-170 **52.216-18** **ORDERING** OCT 1995
(IAW FAR 16.506(a))

For the purpose of this clause, the blank(s) are completed as follows:
(a) **issued from 1 May 2000 through 30 Sep 2000**

I-171 **52.216-19** **ORDER LIMITATIONS** OCT 1995
(IAW FAR 16.506(b))

For the purpose of this clause the blank(s) are completed as follows:
(a) **1 MH**
(b)(1) **$1,983,282.20**
(b)(2) **$1,983,282.20**
(b)(3) **15 days**
(d) **5 days**

I-173 **52.216-21** **REQUIREMENTS** OCT 1995
(IAW FAR 16.506 (d)(1))

For the purposes of this clause the blank(s) are completed as follows:
(f) Contractor shall not be required to make any deliveries under this contract after **15 OCT 2000.**

I-194.	52.217-8	**OPTION TO EXTEND SERVICES** (IAW FAR 17.208(f))	NOV 1999
I-195.	52.217-9	**OPTION TO EXTEND THE TERM OF THE CONTRACT** (IAW FAR 17.208(g))	NOV 1999

For the purposes of this clause the blank(s) are completed as follows:

(a) within **15 CALENDAR DAYS PRIOR TO THE CONTRACT EXPIRATION PERIOD AND, IF EXERCISED, SHALL BE SUBJECT TO CLAUSE I-404 (AVAILABILITY OF FUNDS)**

(c) not to exceed **5 years**

I-214.	52.219-8	**UTILIZATION OF SMALL BUSINESS CONCERNS** (IAW FAR 19.708(a))	OCT 1999
I-215.	52.219-9	**SMALL BUSINESS SUBCONTRACTING PLAN** (IAW FAR 19.708(b)(1))	OCT 1999
I-216C.	52.219-9	**SMALL BUSINESS SUBCONTRACTING PLAN – ALTERNATE II** (IAW FAR 19.708(b)(1)(iii))	JAN 1999
I-223.	52.219-16	**LIQUIDATED DAMAGES–SUBCONTRACTING PLAN** (IAW FAR 19.708(b)(2))	JAN 1999
I-225G.	52.219-23	**NOTICE OF PRICE EVALUATION** ADJUSTMENT FOR SMALL DISADVANTAGED BUSINESS CONCERNS (IAW FAR 19.1104 and DDP Memo dated 25 Jan 2000, effective 24 Feb 2000 - DAR Tracking #2000-O0001)	OCT 1999
I-245.	52.222-1	**NOTICE TO THE GOVERNMENT OF LABOR DISPUTES** (IAW FAR 22.103-5(a))	FEB 1997
I-247.	52.222-3	**CONVICT LABOR** (IAW FAR 22.202)	AUG 1996
I-263E.	52.222-21	**PROHIBITION OF SEGREGATED FACILITIES (DEVIATION)** (IAW FAR 22.810(a)(1), and DP(DAR) Ltr dated 11 Feb 98 (DAR Tracking #98-O0002))	FEB 1999
I-264.	52.222-26	**EQUAL OPPORTUNITY (DEVIATION)** (IAW FAR 22.810(e), and DP(DAR) Ltr dated 11 Feb 98 (DAR Tracking #98-O0002))	FEB 1999
I-274.	52.222-35	**AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA** (IAW FAR 22.1308(b))	APR 1998
I-276.	52.222-36	**AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES** (IAW FAR 22.1408(a))	JUN 1998
I-278.	52.222-37	**EMPLOYMENT REPORTS ON DISABLED VETERANS VETERANS OF THE VIETNAM ERA** (IAW FAR 22.1308(b)	JAN 1999

I-283. **52.222-41** **SERVICE CONTRACT ACT OF 1965, AS AMENDED** MAY 1989
(IAW FAR 22.1006(a))

I-284. **52.222-42** **STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES** MAY 1989
(IAW FAR 22.1006(b))

For the purposes of this clause the blank(s) is/are completed as follows:

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION

Employee Class	Monetary Wage - Fringe Benefits	
Engineer V	**$23.19**	**GS-801-12**
Engineer IV	**$19.36**	**GS-801-11**
Engineer III	**$15.99**	**GS-801-09**
Engineer II	**$13.07**	**GS-801-07**
Engineer I	**$10.56**	**GS-801-05**
Process Control Prog. III	**$19.36**	**GS-334-11**
Process Control Prog. II	**$15.99**	**GS-334-09**
Designer IV	**$17.62**	**GS-818-10**
Designer III	**$15.99**	**GS-818-09**
Designer II	**$11.76**	**GS-818-06**
Draftsman III	**$14.48**	**GS-818-08**
Draftsman II	**$11.76**	**GS-818-06**
Buyer II	**$11.76**	**GS-1105-06**
Buyer I	**$10.56**	**GS-1105-05**
Typist II	**$10.56**	**GS-332-05**
Typist I	**$ 8.40**	**GS-332-03**
Financial Analyst	**$10.56**	**GS-561-05**
Engineering Technician V	**$19.36**	**GS-802-11**
Engineering Technician IV	**$15.99**	**GS-802-09**
Engineering Technician III	**$13.07**	**GS-802-07**
Engineering Technician II	**$10.56**	**GS-802-05**
Engineering Technician I	**$ 9.43**	**GS-802-04**
Technician Aide	**$ 8.40**	**GS-802-03**

I-285. **52.222-43** **FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT ACT--PRICE ADJUSTMENT (MULTIPLE YEAR AND OPTION CONTRACTS)** MAY 1989
(IAW FAR 22.1006 (c)(1))

I-294.	52.223-5	**POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION** (IAW FAR 23.1005)	APR 1998
I-295.	52.223-6	**DRUG-FREE WORKPLACE** (IAW FAR 23.505)	JAN 1997
I-297E.	52.223-14	**TOXIC CHEMICAL RELEASE REPORTING** (IAW FAR 23.907(b))	OCT 1996
I-312.	52.225-13	**RESTRICTIONS ON CERTAIN FOREIGN PURCHASES** (IAW FAR 25.702)	FEB 2000
I-314D.	52.226-1	**UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES** (IAW FAR 26.104(a))	FEB 2000
I-315.	52.227-1	**AUTHORIZATION AND CONSENT** (IAW FAR 27.201-2(a))	JUL 1995
I-317.	52.227-2	**NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENTS** (IAW FAR 27.202-2)	AUG 1996
I-368	52.230-2	**COST ACCOUNTING PRINCIPLES** (IAW FAR 30.201-4(a))	APR 1998
I-372	52.230-6	**ADMINISTRATION OF COST ACCOUNTING STANDARDS** (IAW FAR 30.201-4(d)(1))	NOV 1999
I-389.	52.232-7	**PAYMENTS UNDER TIME-AND-MATERIALS AND LABOR-HOUR CONTRACTS** (IAW FAR 32.111(b))	FEB 1997
I-403.	52.232-17	**INTEREST** (IAW FAR 32.617(a), and 32.617(b))	JUN 1996
I-404	52.232-18	**AVAILABILITY OF FUNDS** (IAW FAR 32.705-1(a))	APR 1984
I-406	52.232-20	**LIMITATION OF COST** (IAW FAR 32.705-2(a))	APR 1984
I-408.	52.232-22	**LIMITATION OF FUNDS** (IAW FAR 32.705-2(c)	APR 1984
I-409.	52.232-23	**ASSIGNMENT OF CLAIMS** (IAW FAR 32.806(a)(1))	JAN 1986
I-412.	52.232-25	**PROMPT PAYMENT** (IAW FAR 32.908(c))	JUN 1997

For the purposes of this clause the blank(s) are completed as follows:

(a)(5)(i) **7th**
(b)(1) **30th**

I-416F	52.232-33	**PAYMENT BY ELECTRONIC FUNDS TRANSFER -- CENTRAL CONTRACTOR REGISTRATION** (IAW FAR 32.1110(a)(1))	MAY 1999

I-417.	52.233-1	**DISPUTES** (IAW FAR 33.215)	DEC 1998
I-419.	52.233-3	**PROTEST AFTER AWARD** (IAW FAR 33.106(b))	AUG 1996
I-420.	52.233-3	**PROTEST AFTER AWARD -- ALTERNATE I** (IAW FAR 33.106(b))	JUN 1985
I-478.	52.237-2	**PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION** (IAW FAR 37.110(b))	APR 1984
I-479.	52.237-3	**CONTINUITY OF SERVICES** (IAW FAR 37.110(c))	JAN 1991
I-531.	52.242-3	**PENALTIES FOR UNALLOWABLE COSTS** (IAW FAR 42.709-6)	OCT 1995
I-532.	52.242-4	**CERTIFICATION OF FINAL INDIRECT COSTS** (IAW FAR 42.703-2(f))	JAN 1997

(c) The certificate of final indirect costs shall read as follows:

CERTIFICATE OF FINAL INDIRECT COSTS

This is to certify that I have reviewed this proposal to establish final indirect cost rates and to the best of my knowledge and belief:

1. All costs included in this proposal (**identify proposal and date**) to establish final indirect costs rates for (**identify period covered by rate**) are allowable in accordance with the cost principles of the Federal Acquisition Regulation (FAR) and its supplements applicable to the contracts to which the final indirect cost rates will apply; and
2. This proposal does not include any costs which are expressly unallowable under applicable cost principles of the FAR or its supplements.

Firm: _____
Signature: _____
Name of Certifying Official: _____
Title: _____
Date of Execution: _____

I-541.	52.242-13	**BANKRUPTCY** (IAW FAR 42.903)	JUL 1995
I-558.	52.243-3	**CHANGES--TIME-AND-MATERIALS OR LABOR-HOURS** (IAW FAR 43.205(c))	AUG 1987
I-570.	52.244-2	**SUBCONTRACTS**	AUG 1998

(d)If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:
all subcontracts which exceed the approval authority of the QAE.

I-571.		**RESERVED**	
I-574.	52.244-6	**SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS** (IAW FAR 44.403)	OCT 1998
I-585.	52.245-5	**GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (DEVIATION)** (IAW FAR 45.106(f)(1), and DDP Memo dated 13 Jul 99, DAR Tracking #99-O0008)	JAN 1986
I5850D	52.245-5	**GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (DEVIATION)** (IAW FAR 45.106(f)(1), and DDP Memo dated 30 Jun 98, DAR Tracking #98-O0007)	JAN 1986
I-630.	52.246-25	**LIMITATION OF LIABILITY--SERVICES** (IAW FAR 46.805)	FEB 1997
I-671.	52.248-1	**VALUE ENGINEERING** (IAW FAR 48.201(b), and DDP Memo dated 10 Jun 99, DAR Tracking #99-O0006)	FEB 2000
I-692.	52.249-6	**TERMINATION (COST-REIMBURSEMENT)** (IAW FAR 49.503(a)(1))	SEP 1996
I-696.	52.249-6	**TERMINATION (COST-REIMBURSEMENT) -- ALTERNATE IV** (IAW FAR 49.503(a)(4))	SEP 1996
I-710.	52.249-14	**EXCUSABLE DELAYS** (IAW FAR 49.505(d))	APR 1984
I-733.	52.252-6	**AUTHORIZED DEVIATIONS IN CLAUSES** (IAW FAR 52.107(f))	APR 1984

For the purpose of this clause the blank(s) is/are completed as follows:
(b) **Defense Federal Acquisition Regulation Supplement** (48 CFR Chapter 2)

I-750.	52.253-1	**COMPUTER GENERATED FORMS** (IAW FAR 53.111)	JAN 1991

IA-22.	252.203-7001	**PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT RELATED FELONIES** (IAW DFARS 203.570-5)	MAR 1999
IA-24.	252.203-7002	**DISPLAY OF DOD HOTLINE POSTER** (IAW DFARS 203.7002)	DEC 1991
IA-33.	252.204-7003	**CONTROL OF GOVERNMENT PERSONNEL WORK** (IAW DFARS 204.404-70(b))	APR 1992
IA-34.	252.204-7004	**REQUIRED CENTRAL CONTRACTOR REGISTRATION** (IAW DFARS 204.7304)	MAR 1998
	(Not applicable to awards with foreign vendors and foreign performance)		
IA-40.	252.205-7000	**PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS** (IAW DFARS 205.470-2)	DEC 1991
IA-90.	252.209-7000	**ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ON-SITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY** (IAW DFARS 209.103-70)	NOV 1995
IA-92.	252.209-7004	**SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY** (IAW DFARS 209.409, and D.L. 98-007 dated 27 Mar 98 (DFARS Case 97-D325))	MAR 1998
IA-152.	252.215-7000	**PRICING ADJUSTMENTS** (IAW DFARS 215.804-8)	DEC 1991
IA-225.	252.219-7003	**SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS)** (IAW DFARS 219.708(b)(1)(A))	APR 1996
IA-280.	252.223-7004	**DRUG-FREE WORK FORCE** (IAW DFARS 223.570-4(a))	SEP 1988
IA-282.	252.223-7006	**PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS** (IAW DFARS 223.7103)	APR 1993
IA-293.	252.225-7012	**PEFERENCE FOR CERTAIN DOMESTIC COMMODITIES** (IAW DFARS 225.7002-3(a))	MAY 1999
IA-312.	252.225-7025	**RESTRICTION ON ACQUISITION OF FORGINGS** (IAW DFARS 225.7102-4(a))	JUN 1997
IA-312C.	252.225-7026	**REPORTING OF CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES** (IAW DFARS 225.7203)	MAR 1998
IA-312H.	252.225-7031	**SECONDARY ARAB BOYCOTT OF ISRAEL** (IAW DFARS 225.770-5)	JUN 1992
IA-399.	252.231-7000	**SUPPLEMENTAL COST PRINCIPLES** (IAW DFARS 231.100-70)	DEC 1991
IA-426.		**RESERVED**	

IA-632. **252.242-7000 POSTAWARD CONFERENCE** DEC 1991
(IAW DFARS 242.570)

IA-649. **252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT** MAR 1998
(IAW DFARS 243.205-72)

(b) I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

_____
(Official's Name)

_____
(Title)

IA-662. **252.245-7001 REPORTS OF GOVERNMENT PROPERTY** MAY 1994
(IAW DFARS 245.505-14(a))

IA-745. **252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA** NOV 1995
(IAW DFARS 247.573(b))

IB-320. **5352.223-9000 ELIMINATION OF USE OF CLASS I OZONE DEPLETING SUBSTANCES (ODS)** MAY 1996
(IAW AFFARS 5323.890-7)

For the purposes of this clause the blank(s) is/are completed as follows:

Substance	Application/Use	Quantity (lbs)
None	**None**	**None**

IB-321. **5352.223-9001 HEALTH AND SAFETY ON GOVERNMENT INSTALLATIONS** JUN 1997
(IAW AFFARS 5323.9002)

IB-343. **5352.242-9000 CONTRACTOR ACCESS TO AIR FORCE INSTALLATIONS** MAY 1996
(IAW AFFARS 5342.490-1)

For the purposes of this clause the blank(s) is/are completed as follows:
(b) N/A

IB-411C. **5352.209-9002 ORGANIZATIONAL CONFLICT OF INTEREST (AFMC)** JUL 1997
(IAW AFMCFARS 5309.507-90(a)(1), and 5315.209-90(i))

(a) The following restrictions and definitions apply to prevent conflicting roles which may bias the Contractor's judgment or objectivity, or to preclude the Contractor from obtaining an unfair competitive advantage in concurrent or future acquisitions.

(1) Descriptions or definitions:

"Contractor" means the business entity receiving the award of this contract, its parents, affiliates, divisions and subsidiaries.

"Development" means all efforts towards solution of broadly-defined problems. This may encompass research, evaluating technical feasibility, proof of design and test, or engineering of programs not yet approved for acquisition or operation.

"Proprietary Information" means all information designated as proprietary in accordance with law and regulation, and held in confidence or disclosed under restriction to prevent uncontrolled distribution. Examples include limited or restricted data, trade secrets, sensitive financial information, and computer software; and may appear in cost and pricing data or involve classified information.
"System" means the system that is the subject of this contract.
"System Life" means all phases of the system's development, production or support.
"Systems Engineering" means preparing specifications, identifying and resolving interface problems, developing test requirements, evaluating test data, and supervising design.
"Technical Direction" means developing work statements, determining parameters, directing other Contractors" operations, or resolving technical controversies.
(2) Restrictions: The Contractor shall perform systems engineering and/or technical direction, but will not have overall contractual responsibility for the system's development, integration, assembly and checkout, or production. The parties recognize that the Contractor shall occupy a highly influential and responsible position in determining the system's basic concepts and supervising their execution by other Contractors. The Contractor's judgment and recommendations must be objective, impartial, and independent. To avoid the prospect of the Contractor's judgment or recommendations being influenced by its own products or capabilities, it is agreed that the Contractor is precluded for the life of the system from award of a DOD contract to supply the system or any of its major components, and from acting as a subcontractor or consultant to a DOD supplier for the system or any of its major components.

IB-411F **5352.209-9002 ORGANIZATIONAL CONFLICT OF INTEREST – ALTERNATE III (AFMC)** JUL 1997
(IAW AFMCFARS 5309.507-90(a)(4))

(b) The Contractor may gain access to proprietary information of other companies during contract performance. The Contractor agrees to enter into company-to-company agreements to (1) protect other company's information from unauthorized use or disclosure for as long as it is considered proprietary by the other company and (2) to refrain from using the information for any purpose other than that for which it was furnished. For information purposes, the Contractor shall furnish copies of these agreements to the Contracting Officer. These agreements are not intended to protect information which is available to the Government or to the Contractor from other sources and furnished voluntarily without restriction.

IB-411G **5352.209-9002 ORGANIZATIONAL CONFLICT OF INTEREST – ALTERNATE IV (AFMC)** JUL 1997
(IAW AFMCFARS 5309.507-90(a)(5))

(c) The Contractor agrees to accept and to complete all issued task orders, and not to contract with Government prime Contractors or first-tier subcontractors in such a way as to create an organizational conflict of interest.

IB-411H **5352.209-9002 ORGANIZATIONAL CONFLICT OF INTEREST – ALTERNATE V (AFMC)** JUL 1997
(IAW AFMCFARS 5309.507-90(a)(6))

(d) The Contractor agrees to accept and to complete issued delivery orders, provided that no new organizational conflicts of interest are created by the acceptance of that order. The Contracting Officer shall identify the organizational conflict of interest in each order. The Contractor shall not contract with Government prime Contractors or first-tier subcontractors in such a way as to create an organizational conflict of interest.

IB-411J **5352.209-9002 ORGANIZATIONAL CONFLICT OF INTEREST – ALTERNATE VI (AFMC)** JUL 1997
(IAW AFMCFARS 5309.507-90(a)(7))

(e) The above restrictions shall be included in all subcontracts, teaming arrangements, and other agreements calling for performance of work which is subject to the organizational conflict of interest restrictions identified in this clause, unless excused in writing by the Contracting Officer.

IB-423 **5352.215-9009 TRAVEL (AFMC)** JUL 1997
(IAW AFMCFARS 5315.209-90(k))

(a) The Contractor may be required to travel within the contiguous United States and overseas. The Contractor may be required to travel by Government-provided transportation. Travel requirements will be reimbursed by separate voucher and must be approved in advance by the Contracting Officer. Travel requirements will be identified, proposed, and negotiated in individual task orders on a cost-reimbursement basis. Billable travel costs are air fare, ground transportation, and per diem costs, not labor hours. The Contractor shall be responsible for obtaining any passports or visas and making travel arrangements to and from any CONUS location.

(1) Per diem, air fare, and all other allowable travel costs shall be reimbursed in accordance with the Federal Acquisition Regulation. All travel within overseas areas shall be approved in advance by the Contracting Officer.
(2) The Government may provide travel to and from overseas work sites via Air Mobility Command (AMC) flights, if available. AMC travel fees may be Contractor-paid and invoiced to the Government. The Government will be responsible for obtaining travel clearances and issuance of any required special orders.

(b) Use of AMC transportation shall be approved in advance by the Contracting Officer or designee. Orders authorizing AMC travel will specify the Contractor's Customer Identification Code (CIC). If the Contractor does not have CIC number, the orders will state "special account handling: billing for AMC transportation will be forwarded to (insert Contractor's address)." Use of AMC transportation is subject to availability.
(c) The travel CLIN is intended to pay for travel occurring at the direction of the Government, performed in conjunction with a specific trip authorized in a task order. Travel by clerical support personnel shall be approved in advance by the Contracting Officer.

IB-445 **5352.219-9000 INCORPORATION OF SUBCONTRACTING PLAN (AFMC)** JUL 1997
(IAW AFMCFARS 5319.705-5(a))

In accordance with FAR 52.219-9, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan, the subcontracting plan contained in proposal #64701-99U/BD0077 dated 4 Jan 00 is incorporated herein by reference. The small business goal is 65%. The small disadvantaged business goal is 5%. The women-owned small business goal is 5%.

IB-462 **5352.227-9000 EXPORT-CONTROLLED DATA RESTRICTIONS (AFMC)** JUL 1997
(IAW AFMCFARS 5327.601(90)

IB-463C **5352.227-9002 VISIT REQUESTS BY FOREIGN OWNED OR CONTROLLED FIRMS (AFMC)** JUL 1997
(IAW AFMCFARS 5327.9002(b)

IB-486C **5352.237-9001 CONTRACTOR IDENTIFICATION (AFMC)** JUL 1997
(IAW AFMCFARS 5337.110-90(b))

(a) Contractor personnel and their subcontractors must identify themselves as Contractors or subcontractors during meetings, telephone conversations, in electronic messages, or correspondence related to this contract.

(b) Contractor-occupied facilities (on AFMC or other Government installations) such as offices, separate rooms, or cubicles must be clearly identified with Contractor supplied signs, name plates or other identification, showing that these are work areas for Contractor or subcontractor personnel.

IB-515C **5352.245-9004 BASE SUPPORT (AFMC)** JUL 1997
(IAW AFMCFARS 5345.106-90 (a))

Base support shall be provided by the Government to the Contractor in accordance with this clause. Failure by the Contractor to comply with the requirements of this clause shall release the Government, without prejudice, from its obligation to provide base support by the date(s) required. If warranted, and if the Contractor has complied with the requirements of this clause, an equitable adjustment shall be made if the Government fails to provide base support by the date(s) required.

(a) Base support includes Government-controlled working space, material, equipment, services (including automatic data processing), or other support (excluding use of the Defense Switched Network (DSN)) which the Government determines can be made available at, or through, any Air Force installation where this contract shall be performed. All Government property in the possession of the Contractor, provided through the base support clause, shall be used and managed in accordance with the Government Property clauses.

(b) The Air Force installations providing the support shall be listed in subparagraph (e), and the Government support to be furnished by each installation under this contract shall be listed in subparagraph (f).

(c) Unless otherwise stipulated in the contract schedule, support shall be provided on a no-charge-for-use basis and the value shall be a part of the Government's contract consideration.

(d) The Contractor agrees to immediately report (with a copy to the cognizant CAO) inadequacies, defective Government-Furnished Property (GFP), or nonavailability of support stipulated by the contract schedule, together with a recommended plan for obtaining the required support. The Government agrees to determine (within 10 workdays) the validity and extent of the involved requirement and the method by which it shall be fulfilled (e.g., purchase, rental, lease, GFP, etc.). Facilities shall not be purchased under this clause. Additionally, the Contractor (or authorized representative) shall not purchase, or otherwise furnish any base support requirement provided by the clause (or authorize others to do so), without prior written approval of the Contracting Officer regarding the price, terms, and conditions of the proposed purchase, or approval of other arrangements.

(e) Following are installations where base support will be provided:
Wright-Patterson AFB OH.

(f) The Government support to be furnished under this contract is **identified in Paragraph 3.0 of the SOW.** Because of the nature and location(s) of the work performed, the value of such equipment is undeterminable. The Contractor shall not incur any cost resulting from nonsupport prior to Contracting Officer concurrence in accordance with this clause.

IB-515D **5352.245-9004** **BASE SUPPORT – ALTERNATE I (AFMC)** JUL 1997
(IAW AFMCFARS 5345.106-90(a))

Add the following paragraph (g) to the basic clause:

(g) When this contract is a cost, cost-reimbursement, time-and-materials, or labor-hour contract, the Contractor agrees that in the performance of this contract or any major subcontract no direct or indirect costs for property will be incurred if the Government determines that property is available at, or through any Air Force installation where this contract shall be performed. Only the prior written approval of the Contracting Officer can relieve the Contractor from this restriction.

PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS
SECTION J
LIST OF ATTACHMENTS
(All listed attachments are at the end of this document)

FORM NR	TITLE	DATE	NR OF PAGES
Exhibit 1	Fixed Rate Chart		21
WAGE DECISION	DEPT OF LABOR 94-2419 REVISION 14	05-27-99	10
Appendix A	PERFORMANCE WORK STATEMENT (PWS)	12-09-99	44
Technical Exhibit 1	PRS		1
Technical Exhibit 2	Workload Estimates		1
Technical Exhibit 3	Maps and Work Area Layouts		4
Technical Exhibit 4	DD Forms 1423-1 (CDRLs) w/ instructions		29
Technical Exhibit 5	Items That The Contractor Will Have Access To		21
Technical Exhibit 6	Quality Standards		1
Technical Exhibit 7	Performance Requirements Table For Use When Surveillance is by Random Sample		1
Technical Exhibit 8	Program Work Breakdown Structure		12

PART IV - REPRESENTATIONS AND INSTRUCTIONS
SECTION L
INSTRUCTIONS, CONDITIONS AND NOTICES TO BIDDERS, OFFERORS OR QUOTERS

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE FEB 1998
(IAW FAR 52.107(a))
The full text of a clause may be accessed electronically at this/these address(es): Regulations URLs: (Click on the appropriate regulation.)
http://farsite.hill.af.mil/reghtml/far/far1toc.htm
http://farsite.hill.af.mil/reghtml/dfars/dfar1toc.htm
http://farsite.hill.af.mil/reghtml/affars/affar1toc.htm
http://farsite.hill.af.mil/reghtml/afmcfars/afmc1toc.htm

NOTE: After selecting the appropriate regulation above, at the "Table of Contents" page conduct a search for the desired regulation reference, using your browser's **FIND** function. When located, click on the **regulation reference** (hyperlink).

L-1H. **52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER** APR 1998
(IAW FAR 4.603(a))

L-8. **52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE** SEP 1990
(IAW FAR 11.604(a))
For the purposes of this provision, the blanks are completed on the cover sheet.

L-30J. **52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION** OCT 1997
(IAW FAR 15.209(a))

L-65C. **52.216-1 TYPE OF CONTRACT** APR 1984
(IAW FAR 16.105)
For the purposes of this provision the blank(s) is/are completed as follows:
Time and Material contract is contemplated

L-91 **52.222-24 PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE EVALUATION (DEVIATION)** FEB 1999
(IAW FAR 22.810(c))

L-94 **52.222-46 EVALUATION OF COMPENSATION FOR PROFESSIONAL EMPLOYEES** FEB 1993
(IAW FAR 22.1103)

L-120. **52.233-2 SERVICE OF PROTEST** AUG 1996
(IAW FAR 33.106(a))
For the purposes of this clause the blank(s) is/are completed as follows:
(a) **(SAME AS BLOCK 7, PAGE 1)**.

L-125. **52.237-1** **SITE VISIT** APR 1984
(IAW FAR 37.110(a))

L-141. **52.252-5** **AUTHORIZED DEVIATIONS IN PROVISIONS** APR 1984
(IAW FAR 52.107(e))

For the purposes of this clause the blank(s) is/are completed as follows:
(b) **Defense Federal Acquisition Regulation Supplement** (48 CFR Chapter 2)

L-204. **252.204-7001** **COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING** AUG 1999
(IAW DFARS 204.602-70)

L-312 **5352.215-9001** **NOTICE OF PRE-BID/PRE-PROPOSAL CONFERENCE** MAY 1996
(IAW AFFARS 5314.207-90 or 5315.201(c)(8))

For the purposes of this clause, the blank(s) is/are completed as follows:

a. AN ORGANIZED PRE-PROPOSAL CONFERENCE AND SITE VISIT HAS BEEN SCHEDULED FOR WEDNESDAY, 8 DECEMBER 1999, 0900-1200, WRIGHT-PATTERSON AFB, OH, AREA B, BLDG 31, ROOM 201C.
(Offerors may obtain passes, maps, and assistance at Visitors Bldg., Area B, Gate 1B, Springfield St., WPAFB, OH 45433-5309.)

b. THE NAMES OF 1-3 PERSONS (MAXIMUM) FROM EACH COMPANY MUST BE PROVIDED TO: MADONNA HART, ASC/PKWOV, 1940 ALLBROOK DRIVE, SUITE 3, WPAFB, OH 45433-5309.

c. NOTIFICATION OF ATTENDEES (ALONG WITH COMPANY NAME, PHONE & FAX NUMBER) AND QUESTIONS ARE REQUESTED VIA FAX (937-257-3926) OR E-MAIL TO SUSAN S. GREEN (EMAIL: susan.green@wpafb.af.mil) THIS NOTIFICATION WILL ENSURE ACCCESS TO THE BASE ALONG WITH ADEQUATE SEATING.

L-411D **5352.209-9003** **POTENTIAL ORGANIZATIONAL CONFLICT OF INTEREST (AFMC)** JUL 1997
(IAW AFMCFARS 5309.507-90(b), and 5315.209-90(i))

(a) There is potential organizational conflict of interest (see FAR Subpart 9.5, Organizational and Consultant Conflicts of Interest) due to **the contractor performing systems engineering and technical direction and the contractor having access to proprietary data owned by other government contractors.** Accordingly:

(1) Restrictions are needed to ensure that **contractor performance in the areas listed in paragraph (a) above prevent conflicting roles which may bias the contractor's judgement or objectivity, or preclude the contractor from obtaining an unfair competitive advantage in concurrent or future acquisitions during the contract period of performance.**

(2) As a part of the proposal, the offeror shall provide the Contracting Officer with complete information of previous or ongoing work that is in anyway associated with the contemplated acquisition.

(b) If award is made to the offeror, the resulting contract may include an organizational conflict of interest limitation applicable to subsequent Government work, at either a prime contract level, at any subcontract tier, or both. During evaluation of proposals, the government may, after discussions with the offeror and consideration of ways to avoid the conflict of interest, insert a special provision in the resulting contract which shall disqualify the offeror from further consideration for award of future contracts.

(c) The organizational conflict of interest clause included in this solicitation may be modified or deleted during negotiations.

L-411E 5352.209-9003 **POTENTIAL ORGANIZATIONAL CONFLICT OF INTEREST ALTERNATE I (AFMC)** JUL 1997
(IAW AFMCFARS 5309.507-90(b), and 5315.407-90(i))
At the discretion of the Contracting Officer, substitute the following paragraph (b) for paragraphs (b) and (c) in the basic provision:

(b) The organizational conflict of interest clause in this solicitation may not be modified or deleted.

L-425C. **5352.215-9016 ACQUISITION OMBUDSMAN (AFMC)** JUL 1997
(IAW AFMCFARS 5315.9001(d))
An Ombudsman has been appointed to hear concerns from offerors or potential offerors during the proposal development phase of this acquisition. The Ombudsman does not diminish the authority of the program director or Contracting Officer, but communicates Contractor concerns, issues, disagreements, and recommendations to the appropriate Government personnel. When requested, the Ombudsman shall maintain strict confidentiality as to the source of the concern. The Ombudsman does not participate in the evaluation of proposals or in the source selection process, and therefore, for routine matters on individual solicitations, interested parties are invited to call **Mr. Stephen Plaisted, Email:** stephen.plaisted@ascsy.wpafb.af.mil. **Commercial phone number (937) 255-9095 or (937) 255-5535. DSN phone number 785-9095 or 785-5535.**.

L-440C **5352.227-9001 QUALIFICATION OF OFFEROR UNDER EXPORT CONTROLLED RESTRICTED SOLICITATION (AFMC)** JUL 1997
(IAW AFMCFARS 5327.9002(a)

L-450 **5352.232-9000 NOTICE OF FUNDING STATUS (AFMC)** JUL 1997
(IAW AFMCFARS 5332.702-90)
Funds are not currently available for this requirement. Offerors are advised that the cost of any response to, or other cost incurred as a result of, this solicitation is at the offeror's own risk. Unless funds are made available for this requirement, no contract will be awarded.

L-556 **PROPOSAL FORMAT AND CONTENTS**

1. Purpose: These instructions prescribe the format of proposals and describe the approach for the development and presentation of proposal data. They are designed to ensure the submission of information essential to the understanding and comprehensive validation of proposals. The instructions permit the inclusion of any additional data or information an offeror deems pertinent. Offerors are cautioned to follow the detailed instructions fully and carefully, as the Government intends to make award based on initial offers received, without discussion of such offers.

2. Proposal Format:

(1) Each proposal will be submitted in three (3) parts, each part separately bound, preferably in loose leaf binders. The entire proposal will consist of no more than three proposal parts and their respective page limitations are as follows:

Part I	Price Proposal	No limit (1 copy)
Part II	Technical Proposal	100 pages (4 copies)
Part III	Past/Present Performance	25 pages (4 copies)

(2)All pages in excess of the above limitation will be disregarded during the evaluation. Proposal shall be double-spaced and printed on 8.5 X 11 inch paper. Printing shall be no smaller than 10 point font. Typing margins shall be one (1) inch on all four side of each page. Each page shall be consecutively numbered. If printing appears on both sides of a sheet of paper, it shall be considered to be two (2) pages.

(3) The page limitations are inclusive of all material except the front and back cover. Additionally, resumes required to be submitted are not included in the total page count and may be single-spaced. Page limitations shown above are the maximum. Evaluators will read only up to the maximum number of pages specified. Pages in excess of the maximum will be removed to ensure they are not evaluated. The clarity, relevance, and conciseness of the proposal are important, not the length. Key points must be easily found or they will be presumed to be lacking.

(4) Where data and/or information appears in one part, it does not have to be repeated in any other part. However, it shall be cross-referenced by indicating the specific location including the page number.

(5) All copies will be submitted to:

ASC/PKWOV
ATTN: SUSAN GREEN
1940 ALLBROOK DRIVE., SUITE 3
WPAFB, OH 45433-5309

3. Price Proposal. Care should be exercised to ensure that technical volumes of the proposal do not include any cost or price data. This section (Part I) of the proposal should include the following:

a. A signed Standard Form 1447, Solicitation, Offer, and Award along with all required fill-ins in Sections B and K.

b. A complete unit and total price support breakdown in support of Section B and Exhibit 1, Fixed Rate Chart. All dollar amounts should be carried out to two decimal places.

c. A statement detailing any exceptions to the terms and conditions of the Request for Proposal (RFP), indicating specific paragraphs.

d. A statement that the offeror and all subcontractors are in compliance with the Service Contract Act (SCA) of 1965, as amended. For certain labor categories, the Performance Work Statement (PWS) provides the Government's assessment of the corresponding category titles and occupational codes from the SCA Directory of Occupations. The minimum qualification requirements set forth in the PWS allow the offeror to propose either SCA or non-SCA covered personnel for certain labor categories. The Government is not making a predetermination of whether or not a particular labor category is SCA; or, if covered, which category from the Directory of Occupations applies. **It is the responsibility of the offeror and the subsequent contract awardee to comply with the SCA.**

e. The following labor categories are considered to be professional employees and the requirements set forth in Provision 52.222-46, "Evaluation of Compensation For Professional Employees (Feb 1993) are applicable: Engineer I, Engineer II, Engineer III, Engineer IV, Engineer V, Designer III, Designer IV, Buyer II, and Buyer I.

4. Technical Proposal

a. The technical proposal (Part II) shall not make reference to cost or price data. It will be evaluated strictly on technical merit.

b. Technical Proposal Requirements: As your technical proposal will primarily describe the capability of your organization to participate in this program, it should be specific and complete in every detail. Understanding of the requirements of these services must be demonstrated by more than a reiteration of the Performance Work Statement (PWS). Statements that the offeror understands, can or will comply with all requirements of the PWS, and phrases such as "standard procedures will be employed" or "well known techniques will be used", will be considered insufficient by the technical evaluation team. Understanding of the requirements refers to the extent the offeror's proposal reflects an adequate approach for meeting the minimum requirements stipulated in this solicitation. The clarity, relevance, and conciseness of the proposal are important, not the length. Key points must be easily found or they will be presumed to be lacking. The Government shall not assume that an offeror possesses any capability unless specified in the proposal. Your technical proposal shall, as a minimum, contain the information specified below in accordance with the following general outline:

(1) Performance Plan subfactor :

The technical proposal shall provide a thorough description of how the offeror intends to meet performance work statement requirements. The proposal shall establish realistic policies and procedures that will provide responsibility for each contract function. Elements within this subfactor are:

(a) ISO 9001 Quality System (PWS: 1.3.2)

(i) The offeror shall submit a technical narrative that describes the offeror's action plan to include entrance and exit criteria, and significant milestones for meeting the quality system requirements, and the offerors knowledge and experience for each of the following items:

(1) ISO/IEC GUIDE 25:1990 Required Elements
(2) ISO 9001:1994 Required Elements
(3) Software Capability Maturity Model (SW-CMM) Level 3 Required Elements

(b) Scientific and Engineering Services (PWS: 5.1.2, 5.1.2.1, 5.1.2.2, 5.1.2.3)

(i) The offeror shall submit a technical narrative that describes the offerors knowledge and experience for each of the following items:

(1) Multi-disciplined engineering design expertise in mechanical systems, electrical and electronic systems, AC and DC motors and motor controls, real-time computer systems architecture, hydraulic and pneumatic systems, and servo-hydraulic control systems for test machinery operation.

(2) High Order Language computer programming expertise focussed on FORTRAN and C programming in the UNIX and Microsoft Windows environment.

(3) Real-time computer systems expertise in specified architectures focussed in IEEE Std 796-1983 (Standard Microcomputer System Bus), IEEE Std 1014-1987 (VMEbus), and IEEE Std 1155-1992 (VXIbus) in order to support the installed LGTF test process control and data acquisition architectures.

(4) L-RAY® shearography system expertise

(ii) The offeror shall submit a proposed solution for sample scenario 1. The sample scenario 1 proposal shall address:

(1) Perform a requirements analysis for a new motor drive system to accomplish the required increase in speed.

(2) Explain the implications to flywheel integrity (stress levels, fatigue life predictions) of the increase in maximum speed.

Sample Scenario Number 1. The Landing Gear Development Facility's 120 inch tire test dynamometer is currently driven by three DC motors, each rated at 1,150 HP (3,450 HP total). The available electrical power is supplied by an incoming 6,900 Volt circuit distributed from substation B to Building 31 via 500 MCM shielded copper cable. Assume this circuit is dedicated to the 120 inch dynamometer. The maximum surface speed of the dynamometer is currently rated at 350 MPH (980.4 RPM) with a maximum acceleration of 24.0 ft/sec/sec. The maximum allowable tire loads that may be applied to the surface of the flywheel, at speed, are 150,000 lb radial load, 75,000 lb side load, and 100,000 lb drag load. The government has a requirement to increase the speed capability of the dynamometer to a new maximum speed of 450 MPH with the same acceleration and load capabilities levels, fatigue life predictions) of the increase in maximum speed.

(c) Test Program Support (PWS: 5.2.2)

(i) The offeror shall submit a technical narrative that describes the offerors knowledge and experience for each of the following items:

(1) Test plan development

(2) Methods for testing landing gear components

(ii) The offeror shall submit a proposed solution for sample scenario 2. The sample scenario 2 proposal shall address:

(1) Design a dynamometer test program to determine the maximum safe tire load for 50 taxi-takeoffs without tread stripping or carcass failure.

Sample Scenario Number 2. An Air Force program office submits an emergency request for assistance. Cargo aircraft deployed overseas are suddenly experiencing a rash of main tire

failures (blow-outs during takeoff) during operations in-theatre. Upon gathering information, you learn that normal daytime ambient conditions are 110 to 130 degrees Fahrenheit, and the operators have been loading their aircraft to the maximum gross weight allowed by the applicable T.O. due to operational requirements to move large amounts of heavy equipment. The normal in-theatre operating profile calls for a 10,000 ft taxi at 35 Kts, followed by a momentary pause, then acceleration to liftoff speed of 200 Kts in 42 seconds. The program office must quickly determine the maximum safe load limits for the tires in these ambient conditions, which are expected to last for the next 90 days. The depot can provide tires from stock for testing within 24 hours.

(d) Engineering Studies (PWS: 5.2.3)

(i) The offeror shall submit a technical narrative that describes the offerors knowledge and experience for each of the following items:

(1) Understanding design and analysis of aircraft landing gear performance phenomena

(2) Understanding analysis of landing gear component stress distributions and fatigue predictions

(3) Understanding test machinery performance and control problems

(4) Understanding requirements definition process for future test machine design projects

(ii) The offeror shall submit a proposed solution for sample scenario 3. The sample scenario 3 proposal shall address:

(1) Identify the most important considerations for the design of a full scale test using existing dynamometer capabilities.

(2) Identify the minimum instrumentation requirements you would recommend.

(3) Explain how you would determine the natural frequencies, including the fundamental shimmy frequency, of the prototype landing gear.

(4) Identify the minimum data sampling rate you would recommend.

(5) Explain how you would approach the requirement to develop and validate a shimmy analysis.

Sample Scenario Number 3. An Air Force aircraft acquisition program in the Engineering and Manufacturing Development Phase has a requirement to certify that the manufacturer's nose landing gear will be dynamically stable and sufficiently well damped to ensure shimmy-free operations during the upcoming flight test program. The program office, along with the aircraft prime contractor has contacted you with a request for quote on a program to certify dynamic stability by full scale testing of prototype hardware and development of a validated shimmy analysis for studying changes to the landing gear configuration.

(2) Management subfactor:

(a) Proposed Organization Structure/Staffing. The proposal shall contain the offeror's proposed manpower staffing by shift and skill classification for each organizational element. Proposal shall address number of proposed employees and the offeror's plan for an organizational structure sufficient to accomplish the tasks outlined in the PWS, with rationale for the proposed organization. The proposal shall describe proposed on-site management to include qualifications, their controls to act and commit the entire business or corporate resources to this program and their ability to negotiate with the Government. The offeror must

demonstrate a management plan that supports a fluctuating workload, permitting him to be responsive to sudden increases or decreases in requirements or rescheduling of test operations and facility maintenance requirements under this effort. Offerors shall submit resumes for 100% of the key positions identified below by an asterisk (*), and have the option of providing resumes for the remainder of the positions identified as follows:

PWS Section	No. of positions	Job Title
1.2.2.8.1.1	One (1)	*Engineer V – Contract Manager
1.2.2.8.1.2	One (1)	*Engineer V – Test Engineer
1.2.2.8.1.3	One (1)	*Engineer V – Electronics Engineer
1.2.2.8.1.4	One (1)	*Engineer V – Computer Engineer
1.2.2.8.1.5	One (1)	*Engineer V – System Engineer
1.2.2.8.2.2	Two (2)	*Engineer IV – Electronics Engineer
1.2.2.8.3.1	One (1)	*Engineer III – Test Engineer
1.2.2.8.4.1	One (1)	*Engineer II – Test Engineer
1.2.2.8.8	One (1)	*Designer IV
1.2.2.8.13	One (1)	Financial Analyst
1.2.2.8.14	One (1)	Buyer II
1.2.2.8.16	One (1)	Typist II
1.2.2.8.19.1	One (1)	*Engineering Technician V – Mechanical
1.2.2.8.19.2	One (1)	*Engineering Technician V – Test
1.2.2.8.19.4	One (1)	*Engineering Technician V – Instrumentation
1.2.2.8.20.1	One (1)	Engineering Technician IV – Mechanical
1.2.2.8.20.2	Two (2)	*Engineering Technician IV – Test
1.2.2.8.20.3	One (1)	Engineering Technician IV – Data & Report
1.2.2.8.20.4	One (1)	*Engineering Technician IV – Instrument
1.2.2.8.20.6	One (1)	Engineering Technician IV – Shearography
1.2.2.8.21.2	One (1)	Engineering Technician III – Test
1.2.2.8.21.3	One (1)	Engineering Technician II – Data & Report
1.2.2.8.22.2	One (1)	Engineering Technician II – Test

NOTE: RESUMES WILL NOT COUNT AGAINST THE PAGE LIMITATION. HOWEVER, RESUMES SHALL BE A MAXIMUM OF TWO (2) PAGES IN LENGTH FOR EACH INDIVIDUAL.

(b) Corporate Management Support. The proposal shall describe corporate support and control over the program.

5. Past/Present Performance:

a. Each offeror shall submit a past/present performance volume (Part III) with their proposal. Offerors are cautioned that the Government will use data provided by each offeror in this volume and data obtained from other sources in the development of performance risk assessments. Submit information on all current or past contracts that you consider relevant in demonstrating your ability to perform the proposed effort.

b. Early Proposal Information: Each offeror shall submit the information shown below (items a through h) for each contract 10 days prior to proposal submittal. Failure to submit early proposal information will not result in offeror disqualification.

(1) Administrative Data:

(a) Company/Division
(b) Program Title
(c) Contract Number
(d) Brief Description of the contractual effort
(e) Type of Contract
(f) Period of Performance
(g) Contract Dollar Value
(h) Current Point of Contact (include name, address, phone and fax numbers

(2) Specific Content: Offerors are required to explain what aspects of the contracts are deemed relevant to the proposed effort. Correlate each aspect of performance to the relevant areas of technical evaluation for this Landing Gear Test Facility effort. Offerors are also permitted, but not required, to submit information on significant achievements or explain past problems they consider relevant to the proposed effort.

L-562 **TIME AND MATERIAL HANDLING CHARGES**

The offeror shall enter, in the blanks below and in Section H, MATERIAL AND SUBCONTRACTED SERVICES HANDLING CHARGES, the applicable percentage handling charges for materials and subcontracts (See the Section I clause entitled "Payments Under Time-and-Materials and Labor-Hour Contracts). The percentages entered shall become ceiling rates, and must reasonably reflect the actual cost experience. An X must be entered in the applicable block 1 through 3. If block 1 is checked the percentage must be zero. Failure to enter a percentage or an X in the applicable box may result in rejection of the offer as non-responsive.

Note: Contractors are referred to Clause M-550P for description of how this factor is used in price assessment.

a. **Materials**

Material Handling_____ %

1. ( ) Is completely included in the hourly rate.

2. ( ) Is not included in the hourly rate.

3. ( ) Is partially included in the hourly rate.

b. **Subcontracted Services**

Handling _____ %

1. ( ) Is completely included in the hourly rate.

2. ( ) Is not included in the hourly rate.

3. ( ) Is partially included in the hourly rate.

c. **General and Administrative:** _____ %

1. ( ) Is completely included in the hourly rate.

2. ( ) Is not included in the hourly rate.

3. ( ) Is partially included in the hourly rate.

PART IV - REPRESENTATIONS AND INSTRUCTIONS
SECTION M
EVALUATION FACTORS FOR AWARD

M-72 **52.217-5** **EVALUATION OF OPTIONS** JUL 1990
(IAW FAR 17.208(c))

M-55OP **PROPOSAL AWARD**

1. All cost, technical, and Past/Present Performance proposals timely received in accordance with (IAW) Federal Acquisition Regulation (FAR) 52.215-1 will be evaluated. Contract award selection will be made through an integrated assessment of each offeror's proposal, to include technical acceptability, price and past/present performance.

2. This acquisition will utilize the **Performance-Price Trade-Off (PPT)** technique to make a best value award decision. Under this approach, compliance with the minimum technical requirements is more important than all other considerations; therefore, technical requirements are not subject to tradeoffs. Tradeoffs may **only** occur between the past/present performance and price/cost evaluation factors. Accordingly, the technical factor is ranked as the most important consideration in assessment for award and the past/present performance and price/cost factors are co-equally and ranked 2nd behind the technical factor. All subfactors/elements are ranked equally. A decision on the technical acceptability of each offeror's technical proposal shall be made. Only those offerors determined to be technically acceptable, either initially or as a result of discussions, will be considered for award. **NOTE: The Government intends to evaluate proposals and award a contract without discussions with offerors.** Therefore, each initial offer should contain the offeror's best terms from a cost or price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. **The Government reserves the right to award no contract at all, depending on the quality of proposals submitted and availability of funds.** The application of the PPT technique in the contract award selection and approval process is as follows:

a. Step One - Determine Technical Acceptability: The Air Force will evaluate all technical proposals received by the required date/time and assign a rating of either acceptable or not acceptable (see Paragraph 3 below). Only proposals deemed technically acceptable (either initially or as the result of clarifications or discussions) will be considered for award.

b. Step Two - Evaluate Price and Performance Confidence:

(1) The Air Force will rank all technically acceptable proposals by total evaluated price. Evaluated price is described in paragraph 5 below. Evaluation of options shall not obligate the Government to exercise such options.

(2) The Air Force will assign a performance confidence rating of exceptional, very good, satisfactory, neutral, marginal, or unsatisfactory to each technically acceptable proposal. Paragraph 3 below describes how the performance risk assessment will be accomplished.

c. Step Three - Award Decision:

(1) Award will be made to the lowest priced, technically acceptable offeror, if that offeror's performance confidence rating is exceptional.

(2) If the lowest priced, technically acceptable offeror's performance confidence rating is less than exceptional, then the Air Force will accomplish a trade-off between price and past performance (based on the assessment as described in Paragraph 3) to determine which offeror's proposal represents the best value to the Government.

(3) A determination will be made by the Government as to which offeror's proposal represents the best value for this acquisition and award will be made to this offeror, subject to a positive responsibility determination IAW FAR Part 9.

3. **Performance Confidence**--The Air Force will assign to each offeror a performance confidence assessment based on the offeror's past and present performance as it relates to the probability of successfully accomplishing this proposed effort. Both past and present performance data provided by the offerors, as well as data obtained independently may be used by the Government to assess performance confidence. Offerors may receive a confidence rating of exceptional, very good, satisfactory, neutral, marginal or unsatisfactory. Each of the performance confidence rating terms is defined below:

Rating	Definition
Exceptional/High Confidence	Based on the offeror's performance record, essentially no doubt exists that the offeror will successfully perform the required effort.
Very Good/Significant Confidence	Based on the offeror's performance record, little doubt exists that the offeror will successfully perform the required effort.

Satisfactory/Confidence	Based on the offeror's performance record, some doubt exists that the offeror will successfully perform the required effort.
Neutral/Unknown Confidence	No performance record identifiable (see FAR 15.305(a)(2)(iii) and (iv)).
Marginal/Little Confidence	Based on the offeror's performance record, substantial doubt exists that the offeror will successfully perform the required effort. Changes to the offeror's existing processes may be necessary in order to achieve contract requirements.
Unsatisfactory/No Confidence	Based on the offeror's performance record, extreme doubt exists that the offeror will successfully perform the required effort.

4. **Technical Proposal:**

a. The technical evaluation team will conduct a technical evaluation independently of the cost/price proposal and Past/Present Performance confidence assessment. The following technical subfactor(s) will be evaluated and judged to be (1) acceptable; (2) marginal; (3) not-acceptable. NOTE: TECHNICAL UNACCEPTABILITY IN ANY OF THE SUBFACTORS MAY RESULT IN UNACCEPTABILITY OF ENTIRE PROPOSAL. The following subfactors will be considered equally with elements to be considered equally within each subfactor.

(i) Performance Plan
(ii) Management

5. **Price Assessment**: An offeror's proposal price will be determined by multiplying the estimated quantity times the unit price for the CLIN (Contract Line Item Number) and totaling the product of that calculation for all priced CLINs and all option periods to arrive at a total estimated contract value. Estimated yearly totals from the attached schedule along with the estimated grand total for all five years shall be posted in the appropriate areas in Section B of the solicitation. All dollar amounts should be carried out two (2) decimal places. Percentage quoted in clause L-562 for material handling and subcontracting handling will be used to evaluate estimated prices by multiplying the quoted percentage to the estimated dollars for material and Subcontracting and adding the amount to the TOTAL Estimated Dollars.

6. Technical Evaluation Standards – A detailed evaluation will be made of the offeror's proposal based on the following technical subfactors and elements listed in L-556 utilizing the following standards:

(a) ISO 9001 Quality System

The standard has been met when the contractor has demonstrated an understanding of the quality system requirements of Section C-1.3.2, including a specific action plan, entrance and exit criteria, and significant milestones for meeting the requirement. The offeror's specific action plan must address all of the required elements of ISO/IEC GUIDE 25:1990, ISO 9001:1994, and for Level 3 of the Software Capability Maturity Model (SW-CMM) promulgated by the Software Engineering Institute (SEI) of Carnegie Mellon University.

(b) Scientific and Engineering Services

(i) The standard has been met when the contractor has demonstrated an understanding of multi-disciplined engineering design in mechanical systems, electrical and electronic systems, AC and DC motors and motor controls, real-time computer systems architecture, hydraulic and pneumatic systems, and servo-hydraulic control systems for test machinery operation.

(ii) The standard has been met when the contractor has demonstrated an understanding of high-order computer languages focussed on FORTRAN and C programming in the UNIX and Microsoft Windows environment, and when the contractor has demonstrated an understanding of real-time process control architectures focussed in IEEE Std 796-1983 (Standard Microcomputer System Bus), IEEE Std 1014-1987 (VMEbus), and IEEE Std 1155-1992 (VXIbus) in order to support the installed LGTF test process control and data acquisition architectures.

(iii) The standard has been met when the contractor has demonstrated an understanding of operation, maintenance and calibration of L-RAY shearography system equipment for aircraft tire nondestructive inspection and has demonstrated the capability to provide fully trained operators of this equipment, qualified to read, analyze and interpret shearographic data.

(c) Test Program Support

The standard has been met when the contractor has demonstrated an understanding of test planning and methods for conducting testing of aircraft landing gear components, including tires, wheels, brakes, struts and other sub-components, integrated landing gear system assemblies, related aerospace vehicle items, and flight system articles and safety equipment compatible with the testing equipment provided within the LGTF.

(d) Engineering Studies

The standard has been met when the contractor has demonstrated an understanding of the technical capabilities needed to conduct engineering design studies and analyses of: (1) aircraft landing gear system and component performance phenomena, such as braking system instabilities, nose landing gear shimmy, gear walk, strut dynamics, and landing gear structural dynamics, including modal analysis; (2) landing gear component stress and strain distributions, and fatigue life predictions; (3) test machinery performance and control problems, and requirements to increase the capabilities and performance of existing test machinery; (4) future test machine design, performance and control requirements.

7. Management

The standard has been met when the contractor has demonstrated the expertise necessary to meet the PWS requirements.

M-553 **EVALUATION OF TECHNICAL PROPOSALS**

(a) Each offeror must show evidence of a capability to provide the mandatory requirements set forth in the Performance Work Statement (PWS) and elsewhere in this solicitation.

(b) A technical review team composed of key government personnel who are expert in their respective disciplines will use their technical skills, knowledge and experience to thoroughly review the adequacy of the proposal. Proposals shall be categorized, following evaluation, as:

(1) Acceptable Proposal--The proposal meets the all the minimum mandatory criteria in the solicitation. Only those proposals determined acceptable, either initially or as a result of exchanges, will be considered for award. Once deemed acceptable, all technical proposals are considered to be equal.

(2) Marginal – but reasonably susceptible of being made acceptable--The proposal does not meet all solicitation requirements; however, there is reason to believe that through minor revisions, an acceptable proposal could result. For award without discussions these proposals are considered "unacceptable."

(3) Not acceptable Proposal--Fails to meet specified minimum performance or capability requirements. Proposals with an unacceptable rating are not awardable.

(c) Items that are deficient or require clarifications must be identified and documented; and, if award without discussions is not made, discussions will be held with all offerors determined within the competitive range (IAW FAR 15.306). If those proposals within the competitive range determined "not acceptable" can be made acceptable during discussions, offerors will be requested to furnish proposal revisions reflecting necessary revisions. At the conclusion of discussions, final proposal revisions will be requested from offers within the competitive range. The results of the technical evaluation will be documented depicting each offeror's proposal rating. Supporting narrative is required to sufficiently explain why each offeror is rated "acceptable," "marginal" or "not acceptable". Prior to award, each offeror not included in the competitive range will be notified in accordance with FAR 15.503. After contract award, each offeror included in the competitive range, but not receiving award, will be notified in accordance with FAR 15.503.

(d) Upon final determination that a proposal is "not acceptable", the Contracting Officer (CO) shall promptly notify the firm submitting the proposal that it will not be considered and shall indicate the basis for the determination.

(e) Where the CO requests offerors to submit additional information, the CO shall set an appropriate time for submission of such additional information as part of the proposal.

PERFORMANCE WORK STATEMENT
FOR
OPERATION AND MAINTENANCE OF THE
AIR VEHICLES LANDING GEAR TEST FACILITY
9 DEC 99

PERFORMANCE WORK STATEMENT
FOR
OPERATION AND MAINTENANCE OF THE
LANDING GEAR DEVELOPMENT AND TEST FACILITY

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SECTION C-1

GENERAL INFORMATION

1.1 SCOPE OF WORK. The contractor shall provide all personnel, equipment, tools, materials, supervision, and other items and services necessary to perform Operation and Maintenance of the Landing Gear Development & Test Facility, including minor facility upgrading, as defined in this PWS except as specified in section C-3 as government furnished property and services at Wright-Patterson AFB, Ohio and other off-site locations. The contractor shall perform to the standards in this contract. The estimated quantities of work are listed in Technical Exhibit 2, Workload Estimates.

1.1.1 **Purpose.** The purpose of this effort is to provide non-personal services for the operation, maintenance, and continuous improvement of the Air Force Research Laboratory (AFRL) Landing Gear Development & Test Facility (LGTF), located at Building 20031, Wright-Patterson AFB, Ohio. The LGTF is assigned to and managed by AFRL's Air Vehicles Directorate, Flight Systems Division. The LGTF is equipped to perform functional tests on landing gear components, such as tires, wheels, brakes, bearings, struts, and actuators, integrated landing gear assemblies, aircraft/aerospace related items, other flight system components and safety equipment. Customers for these services typically include, but are not limited to, AFRL technology programs, Air Force system program offices and depots, other Department of Defense organizations, National Aeronautics and Space Administration, Federal Aviation Administration, foreign governments, and private entities. Testing operations and engineering support involve Research, Development, Test and Evaluation work encompassing the areas of product development, component qualification testing, reliability evaluation, problem and failure investigations, system and component performance and behavior characteristics studies, and the design and development of new landing gear testing technology.

1.2 CONTRACTOR PERSONNEL:

1.2.1 **Contract Manager.** The contractor shall provide a contract manager who shall be responsible for the performance of the work. The name of this person and an alternate or alternates who shall act for the contractor when the manager is absent shall be designated in writing to the Contracting Officer (CO) within 5 days after contract award. The contractor shall provide telephone numbers of the contract manager and alternate or alternates where these persons may be contacted outside of normal duty hours.

1.2.1.1 The contract manager or alternate shall have full authority to act for the contractor on all contractual matters relating to the daily operations of this contract on the installation.

1.2.1.2 The contract manager or alternate shall be available during normal duty hours within 30 minutes to meet on the installation with government personnel designated by the CO to discuss problem areas. The contract manager or alternate shall be on-site during normal duty hours and contingencies requiring work beyond normal duty hours. After normal duty hours, the manager or designated alternate shall be available within 2 hours.

1.2.1.3 The contract manager and alternates must be able to read, write, speak and understand English.

1.2.1.4 In addition to the general requirements of this paragraph, the contract manager shall meet the specific qualification requirements stated in paragraphs 1.2.2.8.1 and 1.2.2.8.1.a below.

1.2.2 **Contractor Employees.** The contractor shall not employ persons for work on this contract if such employee is identified to the contractor by the CO as a potential threat to the health, safety, security, general well-being or operational mission of the installation and its population.

1.2.2.1 Contractor personnel shall present a neat appearance and be easily recognized as contractor employees. The contractor shall furnish an identifying badge, which shall include as a minimum, the person's name, the name of the contractor, and the words Landing Gear Facility. Each employee shall wear the badge on the outer clothing on the front of the body between the neck and the waist so that the badge is visible at all times. If the wearing of a badge would result in a safety hazard for personnel operating or maintaining equipment, a uniform, jumpsuit, or laboratory

jacket may be worn as an outer garment, provided that other identifying marks, such as patches with the name of the contractor, are readily visible and would identify the individual as a contractor employee.

1.2.2.2 The contractor shall ensure that employees have the required current and valid professional degrees and certifications as stated in section 1.2.2.8, below, before starting work under this contract.

1.2.2.3 The contractor shall not employ any person who is an employee of the United States Government if the employment of that person would create a conflict of interest, nor shall the contractor employ any person who is an employee of the Department of the Air Force, either military or civilian, unless such person seeks and receives approval according to the DoD 5500.7-R, *Joint Ethics Regulation (JER)*. In addition, the contractor shall not employ any person who is an employee of the Department of the Air Force if such employment would be contrary to the policies contained in AFI 64-106, *Air Force Industrial Labor Relations Activities*.

1.2.2.4 The contractor is cautioned that off-duty active military personnel hired under this contract may be subject to permanent change of station, change in duty hours, or deployment. Military reservists and National Guard members may be subject to recall to active duty. The abrupt absence of these personnel could adversely affect the contractor's ability to perform. Their absence at any time shall not constitute an excuse for nonperformance under this contract.

1.2.2.5 The contractor is prohibited from employing off-duty Air Force Quality Assurance Evaluators (QAEs) who are providing surveillance on any contracts or subcontracts awarded to the contractor.

1.2.2.6 Control of Contractor Employees. The selection, assignment, reassignment, transfer, supervision, management, and control of contractor employees in performance of this work statement shall be the responsibility and prerogative of the contractor; however, the contractor shall comply with the requirements set forth in the PWS and in Wright-Patterson AFB regulations concerning conduct of employees as referenced herein.

1.2.2.7 Contractor personnel shall comply with directives pertaining to operation of privately-owned vehicles on Wright-Patterson AFB per AFR 125-14, *Motor Vehicle Traffic Supervision*.

1.2.2.8 Qualification Requirements. The contractor shall ensure that employees satisfy the specific qualification requirements listed below for each labor classification:

1.2.2.8.1 ENGINEER V

1.2.2.8.1.1 CONTRACT MANAGER: (Program Manager) Bachelors Degree in Engineering or Science with Masters Degree in Engineering being highly desirable. At least ten (10) years experience in related engineering fields with a minimum of two (2) years specific experience in managing test programs of aircraft tires, wheels, brakes, landing gear struts, and associated aerospace equipment. Comparable experience and qualifications will be considered in lieu of the 2 years specific experience mentioned above. For example, four (4) years of experience in managing aerospace vehicle and component testing programs. In addition, shall posses specific experience and training in contract program management.

1.2.2.8.1.2 TEST ENGINEER: Bachelors Degree in Engineering or Science with State of Ohio Professional Engineer registration highly desirable. At least ten (10) years experience with a minimum of four (4) years in the testing of aircraft tires, wheels, brakes, landing gear struts and associated equipment. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, six (6) years of experience in testing aerospace vehicle structural and mechanical components.

1.2.2.8.1.3 ELECTRONICS ENGINEER: Bachelors Degree in Electrical or Electronics Engineering with at least ten (10) years experience plus a minimum of four (4) years specific experience in electronic network design and development, A-C and D-C motor applications to rotating mechanical systems, sensor applications, feedback control system design and analysis, and servo-hydraulic control systems design. Specific experience related to large electro-mechanical and servo-hydraulic testing machines is required. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, six (6) years of experience in electro-mechanical and servo-hydraulic machine design and analysis.

1.2.2.8.1.4 COMPUTER ENGINEER: Bachelors Degree in Engineering or Computer Science with at least ten (10) years experience with a minimum of four (4) years in real-time computer programming and process control applications development, including specific experience developing device drivers. Specific experience in Hewlett Packard VXI-bus computer hardware and HP-UX operating systems is required. Specific experience in VAX/VMS, UNIX System V, Windows 95, MS-DOS and OS/2 is highly desirable.

1.2.2.8.1.5 SYSTEMS ENGINEER: Bachelors Degree in Engineering or Science with a Masters Degree in Engineering being highly desirable. At least ten (10) years experience with a minimum of four (4) years systems engineering experience in design, fabrication, test, studies and analyses of aerospace vehicle subsystems and related testing systems. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, six (6) years of experience in design and analysis of aerospace testing systems.

1.2.2.8.2 ENGINEER IV

1.2.2.8.2.1 TEST ENGINEER: Bachelors Degree in Engineering or Science with at least seven (7) years experience in related areas. At least four (4) years of this experience shall have been specifically in the area of aerospace vehicle equipment test program design, requirements analysis, and documentation. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, seven (7) years of experience conducting general vehicle mobility systems testing. State registration as an Engineer-in-Training is required.

1.2.2.8.2.2 ELECTRONICS ENGINEER: Bachelors Degree in Engineering or Science[1] with at least seven (7) years experience in related areas. At least four (4) years of this experience shall have been specifically in the area of circuit design, integrated circuit board development and testing, embedded software systems development and validation, data acquisition and process control. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, four (4) years in closed loop servo systems.

[1] NOTE: Fifteen (15) years of direct experience in this field may be substituted for the technical degree requirement.

1.2.2.8.3 ENGINEER III

1.2.2.8.3.1 TEST ENGINEER: Bachelors Degree in Engineering or Science with at least four (4) years experience in related areas. At least two (2) years of this experience shall have been specifically in the area of aerospace vehicle equipment testing and quality assurance. Comparable experience and qualifications will be considered in lieu of the 2 years specific experience mentioned above. For example, three (3) years in conducting and evaluating general test programs. State registration as an Engineer-in-Training is highly desirable.

1.2.2.8.3.2 ELECTRONICS ENGINEER: Bachelors Degree in Engineering or Science[2] with at least four (4) years experience in related areas. At least three (3) years of this experience shall have been specifically in the area of instrumentation, such as strain gages, load cells, pressure transducers, etc., and data collection required in conducting tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 3 years specific experience mentioned above. For example, three (3) years in closed loop servo systems.

[2] NOTE: Ten (10) years of direct experience in this field may be substituted for the technical degree requirement.

1.2.2.8.4 ENGINEER II

1.2.2.8.4.1 TEST ENGINEER: Bachelors Degree in Engineering or Science[3] with a minimum of two (2) years experience in related areas. One (1) year of this experience shall have been specifically in area of supervision of engineering technicians in the conduct of aircraft tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 1 year specific experience mentioned above. For example, two (2) years direct experience in conducting and evaluating tests.

1.2.2.8.4.2 ELECTRONICS ENGINEER: Bachelors Degree in Engineering or Science[3] with at least two (2) years experience in related areas. At least one (1) year of this experience shall have been specifically in the area of instrumentation, such as knowledge of strain gages, load cells and pressure transducers, etc., and data collection and process control required in conducting tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 1 year specific experience mentioned above. For example, two (2) years of closed loop servo systems.

1.2.2.8.4.3 GENERAL ENGINEER: Bachelors Degree in Engineering or Science[3] with at least two (2) years of general experience. Comparable experience and qualifications will be considered in lieu of the 2 years general experience mentioned above. For example, two (2) years in conducting and evaluating general test programs.

[3] NOTE: Five (5) years of direct experience in this field may be substituted for the technical degree requirement.

1.2.2.8.5 ENGINEER I

1.2.2.8.5.1 GENERAL ENGINEER: Bachelors Degree in Engineering or Science.

1.2.2.8.6 PROCESS CONTROL PROGRAMMER III **(SCA Code 03073)**

SPECIFIC REQUIREMENTS: Shall have a Bachelors Degree in Computer Programming or Mathematics with at least five (5) years experience in the field of computer programming. Shall possess at least two (2) years of specific experience in developing applications programs in the C and FORTRAN programming languages in a UNIX environment or specifically in the HP-UX environment. Specific experience in C programming in the MS-DOS and OS/2 environment is highly desirable.

1.2.2.8.7 PROCESS CONTROL PROGRAMMER II **(SCA Code 03072)**

SPECIFIC REQUIREMENTS: Bachelors Degree in Computer Programming is highly desirable, however, graduation from a recognized technical school with a certificate in Computer Programming is required. Shall have at least two (2) years experience in "C" programming in a UNIX environment for process control operation.

1.2.2.8.8 DESIGNER IV

SPECIFIC REQUIREMENTS: Design responsibility for mechanical layout and technical analysis of test fixtures and other test support hardware for adequacy of materials and components. Design may deal with complex electronic subsystems required in support of new aircraft tire, wheel, brake and gear test equipment or required to provide increased capability and/or reliability of existing test equipment. May prepare drawings, direct their preparation by draftsmen to fabricate bread board electronic circuits to demonstrate feasibility of design. Shall have as a minimum an Associate Degree in Engineering or Science, or equivalent experience. Shall have a minimum of eight (8) years design experience with at least five (5) years or equivalent of experience in designing equipment used in testing aircraft tires, wheels, brakes and gears. Comparable experience and qualifications will be considered in lieu of the 5 years specific experience mentioned above. For example, five (5) years experience in designing for automotive and heavy equipment testing.

1.2.2.8.9 DESIGNER III

SPECIFIC REQUIREMENTS: Shall have as a minimum, an Associate Degree in Engineering or Science, or equivalent experience. Shall have a minimum of three (3) years experience in designing equipment used in testing aircraft tires, wheels, brakes and gears. Comparable experience and qualifications will be considered in lieu of the 3 years specific experience mentioned above. For example, three (3) years experience in designing for automotive and heavy equipment testing.

1.2.2.8.10 DESIGNER II **(SCA Code 29063)**

SPECIFIC REQUIREMENTS: Shall have successfully completed appropriate trade school courses, with an Associate Degree in Engineering being desirable. Shall have a minimum of one (1) year experience in designing equipment used in testing aircraft tires, wheels, brakes and gears. Comparable experience and qualifications will be considered in lieu of the 1 year specific experience mentioned above. For example, one (1) year of automotive experience.

1.2.2.8.11 DRAFTSMAN III **(SCA Code 29063)**

SPECIFIC REQUIREMENTS: Duties typically involve such work as: Preparing working drawings of subassemblies with irregular shapes, multiple functions and precise positional relationships between components; Preparing detailed drawings of test equipment and test fixtures required in support of aircraft tire, wheel, brake and gear testing. May also occasionally use accepted formulas and manuals in making necessary computations to determine quantities of materials to be used, load capacities, strengths, stresses, etc. Receives initial instructions, requirements and advice from supervisor. Completed work is checked for technical adequacy. Shall possess a high school education plus five (5) years of experience in related field.

1.2.2.8.12 DRAFTSMAN II **(SCA Code 29062)**

SPECIFIC REQUIREMENTS: Shall possess a high school education with two (2) years of experience in related field.

1.2.2.8.13 FINANCIAL ANALYST **(SCA Code 01014)**

SPECIFIC REQUIREMENTS: Performs combinations of calculating, posting and verification duties to obtain financial and inventory data for use in maintaining facility records. May do clerical work such as typing, filing, mail sorting and distribution. Maintains time card records to ensure proper work orders, sick leave and personnel leave time. Verifies all purchase order records and posts payments from cash disbursement sheets to the purchase orders. Reviews payment records for overages, shortages and no payments. Prepares all labor and material vouchers for submission to the Government for payment. Accumulates and formats all data required from daily reports to publish the 14-day facility usage report. Enters data into an approved computerized data base system for storage, retrieval, printing and archival. Maintains, inventories and tracks all non-expendable hardware and equipment purchased under the contract. Accounts for all expenditures against the petty cash fund. Must possess as a minimum an Associate Degree in Accounting with at least four (4) years experience. Ten (10) years practical experience in accounting may be substituted in lieu of a formal Associate Degree in Accounting.

1.2.2.8.14 BUYER II

SPECIFIC REQUIREMENTS: Receives requisitions and checks for proper authorization signatures, for quantity, specifications, quality assurance requirements and delivery requirements. Investigates sources of supply and issues formal request for quotations if required. Develops substitutes in conjunction with requisitioner of material if unavailable, delivery is not acceptable, or if more economical product might be satisfactory. Receives quotations by mail, FAX, telephone or through personal representation of bidders. Analyzes quotations, verifies specifications or quality assurance requirements, checks quantities, terms and conditions. Compares competitive products for desirability and use in conjunction with requisitioner. Determines best source considering price, delivery requirements, specifications, and places purchase order. Assures source and price justification is provided on all requisitions or purchase orders over $2,500.00 total value. Justification must meet government requirements. Advises requisitioner of alternate supply sources as well as vendors with poor performance records. Expedites purchase order. Contacts suppliers to assure delivery dates are met. Informs requisitioner of changes in delivery or price or any other problems that might prevent timely delivery of the requested items or services. Bachelors degree in Business Administration or equivalent and three (3) years experience in related field. Thorough knowledge of purchasing procedures and internal controls. Comparable experience and qualifications will be considered in lieu of the 3 years specific experience and degree requirement mentioned above. For example, six (6) years "hands on" experience in lieu of a degree.

1.2.2.8.15 BUYER I

SPECIFIC REQUIREMENTS: Obtains materials from suppliers at the lowest cost consistent with considerations of quality, reliability of sources and urgency of need. Studies market trends, interviews vendors and recommends sources of supply. Analyzes quotations received, selects or recommends suppliers and schedules deliveries. Prepares orders and follows up on orders to expedite delivery and shipment. Obtains certifications of delivery and conducts check against order. Checks and approves for payment, invoices for orders placed. Develops and maintains necessary records and files for efficient operation. Bachelors degree in Business Administration or equivalent, and up to one (1) year of experience. Comparable experience and qualifications will be considered in lieu of the 1 year specific experience and degree requirement mentioned above. For example, three (3) years "hands on" experience in lieu of a degree.

1.2.2.8.16 TYPIST II **(SCA Code 01612)**

SPECIFIC REQUIREMENTS: Capable of typing 40 to 50 words per minute. Types material in final form when it involves combining material from several sources. Responsible for correct spelling, grammar, punctuation, etc., of technical or unusual words, planning layout and typing complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances. Shall possess a high school education with four (4) years experience.

1.2.2.8.17 TYPIST I **(SCA Code 01611)**

SPECIFIC REQUIREMENTS: Capable of typing 40 to 50 words per minute. Types copy from rough or clear drafts. Does routine typing of forms, sets up simple standard tabulations, and copies more complex tables already set up and properly spaced. Shall possess a high school education.

1.2.2.8.18 ENGINEERING TECHNICIAN VI **(SCA Code 29086)**

1.2.2.8.18.1 MECHANICAL TECHNICIAN: Shall frequently analyze the performance characteristics and determine malfunctions in a variety of engineering test equipment, correct malfunctions, and modify equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is required. Shall possess twelve (12) years of experience in pertinent areas to include a minimum of eight (8) years experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 8 years specific experience mentioned above. For example, eight (8) years experience in plant maintenance.

1.2.2.8.18.2 TEST TECHNICIAN: Shall frequently analyze the characteristics of the test operation to assist engineers in determining the effectiveness of the operation. Review and analyze test conditions with respect to test requirements and analyze and evaluate a variety of engineering data. May supervise the work of several lower level technicians. Two (2) years of education beyond the high school level is required. Shall possess twelve (12) years of experience in pertinent areas to include a minimum of eight (8) years experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 8 years specific experience mentioned above. For example, eight (8) years in conducting and evaluating general test programs.

1.2.2.8.18.3 DATA & REPORT TECHNICIAN: Shall frequently analyze the performance characteristics of a variety of engineering test equipment. Review and analyze test conditions with respect to test requirements, analyze and evaluate a variety of engineering data, prepare reports on findings and recommendations. May supervise the work of several lower level engineering technicians. Two (2) years of education beyond the high school level is required. Shall possess twelve (12) years experience in pertinent areas including a minimum of eight (8) years experience specifically with aircraft tire, wheel, brake and gear test procedures and equipment. Comparable experience and qualifications will be considered in lieu of the 8 years specific experience mentioned above. For example, eight (8) years in conducting and evaluating general test programs.

1.2.2.8.18.4 INSTRUMENTATION TECHNICIAN: Shall frequently analyze the performance characteristics and detect malfunctions in a variety of engineering test instrumentation and process controllers, correct malfunctions, modify equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is required. Twelve (12) years of experience in pertinent areas including a minimum of eight (8) years of experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 8 years specific experience mentioned above. For example, eight (8) years of general instrumentation lab experience.

1.2.2.8.18.5 MACHINIST: Performs non-routine and complex machine shop assignments involving responsibilities for planning and conducting complete machine shop projects of relatively limited scope or a portion of a larger and more diverse task. Selects and adapts plans, techniques, designs or layouts. May coordinate portions of overall assignments, reviews, analyzes and integrates technical work of others. Supervisor or professional engineer outlines objectives, requirements and design approaches. Completed work is reviewed for technical adequacy and satisfaction of requirements. Two (2) years of education beyond the high school level is required with twelve (12) years experience in pertinent areas of machine shop operation.

1.2.2.8.18.6 SHEAROGRAPHY TECHNICIAN: Shall frequently operate and analyze aircraft tire shearographic nondestructive testing equipment. Review, analyze and evaluate shearography test data with respect to test requirements and acceptance criteria; prepare reports on findings and recommendations. May supervise the work of lower level engineering technicians. Two (2) years of education beyond the high school level is required. Shall possess twelve (12) years experience in pertinent areas including a minimum of eight (8) years experience specifically with aircraft tire, wheel, brake and gear test procedures and equipment, including five (5) years experience specifically with aircraft tire shearographic test equipment. Comparable experience will be considered in lieu of the 5 years specific experience mentioned above. For example, twelve (12) years in conducting and evaluating nondestructive testing and inspection programs.

1.2.2.8.19 ENGINEERING TECHNICIAN V

1.2.2.8.19.1 MECHANICAL TECHNICIAN: **(SCA Code 29085)** Shall frequently analyze the performance characteristics and determine malfunctions in a variety of engineering test equipment, correct malfunctions, and modify equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is highly desirable. Shall possess ten (10) years of experience in pertinent areas to include a minimum of six (6) years experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 6 years specific experience mentioned above. For example, six (6) years experience in plant maintenance.

1.2.2.8.19.2 TEST TECHNICIAN: **(SCA Code 29085)** Shall frequently analyze the characteristics of the test operation to assist engineers in determining the effectiveness of the operation. Review and analyze test conditions with respect to test requirements and analyze and evaluate a variety of engineering data. May supervise the work of several lower level technicians. Two (2) years of education beyond the high school level is highly desirable. Shall possess ten (10) years of experience in pertinent areas to include a minimum of six (6) years experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 6 years specific experience mentioned above. For example, six (6) years in conducting and evaluating general test programs.

1.2.2.8.19.3 DATA & REPORT TECHNICIAN: Shall frequently analyze the performance characteristics of a variety of engineering test equipment. Review and analyze test conditions with respect to test requirements, analyze and evaluate a variety of engineering data, prepare reports on findings and recommendations. May supervise the work of several lower level engineering technicians. Two (2) years of education beyond the high school level is highly desirable. Shall possess ten (10) years experience in pertinent areas including a minimum of six (6) years experience specifically with aircraft tire, wheel, brake and gear test procedures and equipment. Comparable experience and qualifications will be considered in lieu of the 6 years specific experience mentioned above. For example, six (6) years in conducting and evaluating general test programs.

1.2.2.8.19.4 INSTRUMENTATION TECHNICIAN: **(SCA Code 29085)** Shall frequently analyze the performance characteristics and detect malfunctions in a variety of engineering test instrumentation and process controllers, correct malfunctions, modify equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is highly desirable. Ten (10) years of experience in pertinent areas including a minimum of six (6) years of experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 6 years specific experience mentioned above. For example, six (6) years of general instrumentation lab experience.

1.2.2.8.19.5 MACHINIST: Performs non-routine and complex machine shop assignments involving responsibilities for planning and conducting complete machine shop projects of relatively limited scope or a portion of a larger and more diverse task. Selects and adapts plans, techniques, designs or layouts. May coordinate portions of overall assignments, reviews, analyzes and integrates technical work of others. Supervisor or professional engineer outlines objectives, requirements and design approaches. Completed work is reviewed for technical adequacy and satisfaction of requirements. Two (2) years of education beyond the high school level is highly desirable with ten (10) years experience in pertinent areas of machine shop operation.

1.2.2.8.19.6 SHEAROGRAPHY TECHNICIAN: Shall frequently operate and analyze aircraft tire shearographic nondestructive testing equipment. Review, analyze and evaluate shearography test data with respect to test requirements and acceptance criteria; prepare reports on findings and recommendations. May supervise the work of lower level engineering technicians. Two (2) years of education beyond the high school level is highly desirable. Shall possess ten (10) years experience in pertinent areas including a minimum of six (6) years experience specifically with aircraft tire, wheel, brake and gear test procedures and equipment, including three (3) years experience specifically with aircraft tire shearographic test equipment. Comparable experience will be considered in lieu of the 6 years specific experience mentioned above. For example, six (6) years in conducting and evaluating nondestructive testing and inspection programs.

1.2.2.8.20 ENGINEERING TECHNICIAN IV

1.2.2.8.20.1 MECHANICAL TECHNICIAN: **(SCA Code 29084)** Shall frequently analyze the performance characteristics and determine malfunctions in a variety of engineering test equipment, correct malfunctions, modify equipment to improve performance and/or reliability. May supervise the work of several lower level technicians. Two (2) years of education beyond the high school level is highly desirable. Shall possess eight (8) years of experience in pertinent areas to include a minimum of five (5) years experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 5 years specific experience mentioned above. For example, Five (5) years of plant maintenance operations.

1.2.2.8.20.2 TEST TECHNICIAN: **(SCA Code 29084)** Shall frequently analyze the characteristics of the test operations to assist engineers in determining the effectiveness of operation. Analyzes and evaluates a variety of engineering data, and prepares reports on findings and recommendations. Two (2) years of education beyond the high school level is highly desirable. Shall possess eight (8) years experience in pertinent areas including a minimum of five (5) years experience specifically with aircraft tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 5 years specific experience mentioned above. For example, five (5) years in conducting and evaluating general programs.

1.2.2.8.20.3 DATA & REPORT TECHNICIAN: **(SCA Code 29084)** Shall frequently analyze the performance characteristics of a variety of engineering test equipment. Review and analyze test conditions with respect to test requirements. Analyze and evaluate a variety of engineering data, prepare reports on findings and recommendations. Two (2) years of education beyond the high school level is highly desirable. Shall possess eight (8) years experience in pertinent areas including a minimum of five (5) years experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 5 years specific experience mentioned above. For example, five (5) years in conducting and evaluating general test programs.

1.2.2.8.20.4 INSTRUMENTATION TECHNICIAN: **(SCA Code 29084)** Shall frequently analyze the performance characteristics and detect malfunctions in a variety of engineering test instrumentation and process controllers, correct malfunctions and modify equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is highly desirable. Shall possess eight (8) years of experience in pertinent areas, including a minimum of five (5) years of experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 5 years specific experience mentioned above. For example, five (5) years of general instrumentation experience.

1.2.2.8.20.5 MACHINIST: Shall perform non-routine and complex machine shop assignments involving responsibilities for planning and conducting complete machine shop projects of relatively limited scope or a portion of a larger and more diverse task. Selects and adapts plans, techniques, designs or layouts. May coordinate portions of overall assignments, reviews, analyzes and integrates technical work of others. Supervisor or professional engineer outlines objectives, requirements and design approaches. Completed work is reviewed for technical adequacy and satisfaction of requirements. Two (2) years of education beyond the high school level is highly desirable with eight (8) years experience in pertinent areas of machine shop operations.

1.2.2.8.20.6 SHEAROGRAPHY TECHNICIAN: **(SCA Code 29084)** Shall frequently operate and analyze aircraft tire shearographic nondestructive testing equipment. Review, analyze and evaluate shearography test data with respect to test requirements and acceptance criteria; prepare reports on findings and recommendations. May supervise the work of lower level engineering technicians. Two (2) years of education beyond the high school level is highly desirable. Shall possess eight (8) years experience in pertinent areas including a minimum of five (5) years experience specifically in aircraft tire, wheel, brake and gear test procedures and equipment, including two (2) years experience specifically with aircraft tire shearographic test equipment. Comparable experience will be considered in lieu of the 5 years specific experience mentioned above. For example, five (5) years in conducting and evaluating nondestructive testing and inspection programs.

1.2.2.8.21 ENGINEERING TECHNICIAN III

1.2.2.8.21.1 MECHANICAL TECHNICIAN: Shall frequently analyze the performance characteristics and determine malfunctions in a variety of engineering test equipment, corrects malfunctions, modifies equipment to improve performance and/or reliability. Shall frequently analyze the characteristics of the test operation to assist engineers in determining the effectiveness of the operation. Analyzes and evaluates a variety of engineering data, prepares reports on findings and makes recommendations. May supervise the work of several lower level technicians. Two (2) years of education beyond the high school level is highly desirable. Shall possess six (6) years of experience in pertinent areas to include a minimum of four (4) years experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, four (4) years of plant maintenance.

1.2.2.8.21.2 TEST TECHNICIAN: **(SCA Code 29083)** Shall frequently analyze the characteristics of the test operations to assist engineers in determining the effectiveness of the operation. Analyzes and evaluates a variety of engineering data, prepares reports on findings and recommendations. Two (2) years of education beyond the high school level is highly desirable. Shall possess six (6) years experience in pertinent areas with a minimum of four (4) years specific experience with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, four (4) years in conducting and evaluating general programs.

1.2.2.8.21.3 DATA & REPORT TECHNICIAN: **(SCA Code 29083)** Shall frequently set up and operate standard test equipment in accordance with specified procedures. Records test data, extracts and compiles engineering data to insure that actual test conditions meet test requirements. May supervise other technicians assisting in the performance of tests. Two (2) years of education beyond the high school level is highly desirable. Shall possess six (6) years experience in pertinent areas including a minimum of four (4) years specific experience in aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, four (4) years in conducting and evaluating general programs.

1.2.2.8.21.4 INSTRUMENTATION TECHNICIAN: Shall frequently analyze the performance characteristics and detect malfunctions in a variety of engineering test instrumentation and process controllers, corrects malfunctions, modify equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is highly desirable. Shall possess six (6) years of experience in pertinent areas including a minimum of four (4) years of experience specifically with aircraft tire, wheel, brake and gear test equipment. Comparable experience and qualifications will be considered in lieu of the 4 years specific experience mentioned above. For example, four (4) years of general instrumentation experience.

1.2.2.8.21.5 MACHINIST: Shall perform non-routine and complex machine shop assignments involving responsibilities for planning and conducting complete machine shop projects of relatively limited scope or a portion of a larger and more diverse task. Selects and adapts plans, techniques, designs or layouts. May coordinate portions of overall assignments, reviews, analyzes and integrates technical work of others. Supervisor or professional engineer outlines objectives, requirements and design approaches. Completed work is reviewed for technical adequacy and satisfaction of requirements. Two (2) years of education beyond the high school level is highly desirable with six (6) years experience in pertinent areas.

1.2.2.8.22 ENGINEERING TECHNICIAN II

1.2.2.8.22.1 MECHANICAL TECHNICIAN: Shall frequently analyze and detect malfunctions in a variety of engineering test support machines, corrects malfunctions, modifies equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is highly desirable. Shall possess four (4) years experience in pertinent areas to include a minimum of three (3) years of experience specifically with aircraft tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 3 years specific experience mentioned above. For example, three (3) years of plant maintenance.

1.2.2.8.22.2 TEST TECHNICIAN: **(SCA Code 29082)** Shall frequently compile the performance data of a variety of engineering test equipment, together with the associated engineering test data, in order that Quality Control analyses may be conducted. Two (2) years of education beyond the high school level is highly desirable. Shall possess four (4) years experience in pertinent areas, to include a minimum of three (3) years of experience specifically with aircraft tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 3 years specific experience mentioned above. For example, three (3) years in conducting and evaluating general test programs.

1.2.2.8.22.3 DATA & REPORT TECHNICIAN: Shall frequently set up and operate standard test equipment in accordance with specific procedures. Records test data, extracts and compiles engineering data to insure that actual test conditions meet the test requirements. Two (2) years of education beyond the high school level is highly desirable. Shall possess four (4) years experience in pertinent areas to include a minimum of three (3) years of experience specifically with aircraft tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 3 years specific experience mentioned above. For example, three (3) years in conducting and evaluating general programs.

1.2.2.8.22.4 INSTRUMENTATION TECHNICIAN: Shall frequently analyze the performance characteristics and detect malfunctions in a variety of engineering test instrumentation and process controllers. Corrects malfunctions, modifies equipment to improve performance and/or reliability. Two (2) years of education beyond the high school level is highly desirable. Shall possess four (4) years experience in pertinent areas to include a minimum of three (3) years of experience specifically with aircraft tire, wheel, brake and gear testing. Comparable experience and qualifications will be considered in lieu of the 3 years specific experience mentioned above. For example, three (3) years of general instrumentation experience

1.2.2.8.22.5 MACHINE TECHNICIAN: Performs standardized machine shop tasks involving a sequence of operations. Follows standard shop work methods, engineering drawings or explicit instructions. Technical adequacy of routine work is reviewed on completion. Non-routine work may also be reviewed in process. Two (2) years of education beyond the high school level is highly desirable. Shall possess four (4) years experience in pertinent areas.

1.2.2.8.23 ENGINEERING TECHNICIAN I **(SCA Code 29081)**

1.2.2.8.23.1 MECHANICAL TECHNICIAN: Shall frequently assist in analyzing performance characteristics and detects malfunctions in a variety of engineering test equipment. Assists in the correcting of malfunctions. Assists in modifications to improve performance and/or reliability. Shall possess a high school education plus two (2) years experience in related areas with a minimum of one (1) year experience in aircraft tire, wheel, brake and gear testing or equivalent, such as general testing and evaluation.

1.2.2.8.23.2 TEST TECHNICIAN: Shall frequently set up and operate standard test equipment in accordance with specific procedures. Records test data, extracts and compiles engineering data to insure that actual test conditions meet test requirements. Shall possess a high school education plus two (2) years experience in related areas with a minimum of one (1) year experience in aircraft tire, wheel, brake and gear testing or equivalent, such as general testing and evaluation.

1.2.2.8.23.3 DATA & REPORT TECHNICIAN: Shall frequently set up and operate standard test equipment in accordance with specific procedures. Records test data, extracts and compiles engineering data to insure that actual test conditions meet the test requirements. Shall possess a high school education plus two (2) years experience in related areas with a minimum of one (1) year experience in aircraft tire, wheel, brake and gear testing or equivalent, such as general testing and evaluation.

1.2.2.8.23.4 INSTRUMENTATION TECHNICIAN: Shall frequently analyze the performance characteristics and detects malfunctions in a variety of engineering test instrumentation and process controllers. Corrects malfunctions and modifies equipment to improve performance and/or reliability. Shall possess a high school education plus two (2) years experience in related areas with a minimum of one (1) year experience in aircraft tire, wheel, brake and gear testing or equivalent, such as strain gage application, signal conditioning, and general instrumentation.

1.2.2.8.23.5 MACHINE TECHNICIAN: Perform routine machine shop tasks under close supervision or from established procedures. Work is checked in progress or on completion. Perform shop maintenance under supervision. Shall possess a high school education plus two (2) years experience in pertinent areas.

1.2.2.8.24 LABORER (TECHNICIAN APPRENTICE) **(SCA Code 23470)**

SPECIFIC REQUIREMENTS: Performs routine tasks under close supervision. Work is checked in process. Assists in assembly and installation of equipment used for testing. Assists in mechanical assembly and installation of test articles. Assists in calibration of simple instrumentation, such as data collection equipment, transducers, etc. Assists in correction of malfunctions in a variety of engineering test equipment and the cleaning and lubrication of the test equipment. Shall possess a high school education or equivalent. Prior experience in aircraft tire, wheel, brake and landing gear maintenance and service is not required.

1.2.3 **Security Requirements.**

1.2.3.1 The contract manager or alternate shall complete a "Request for Identification Credential (AFMC Form 496)" for each employee of the contractor requiring access to Wright-Patterson Air Force Base. The requests shall be submitted to Pass and Registration (Building 286, Area A). The government will provide a completed "Identification Credential (AFMC Form 387)" which shall be issued, displayed and surrendered as directed in AFI 31-209, *The Air Force Resource Protection Program*.

1.2.3.2 The contractor is required to comply with all security regulations and directives as identified herein and other security requirements as shown elsewhere in this contract.

1.2.4 **Employee Training.** The contractor shall provide trained employees who are fully qualified to perform to the requirements stated in this PWS. The contractor shall provide any required new or refresher training to employees, at no direct cost to the government, when the purpose of the training is to enhance or improve the employees job qualifications or professional development. For example; (1) fundamentals of management, supervision, etc.; (2) fundamental technical disciplines in engineering, science, or technical trades; (3) business administration and accounting; (4) computer literacy and personal computer skills.

1.2.4.1 The government will reimburse the contractor for on-the-job or vendor provided training directly related to the operation, maintenance and/or upgrading of facility test equipment and specialized data acquisition equipment and software programs, and will reimburse the contractor for any unique or unusual training requirements directly associated with efforts tasked to the contractor under Section C-5.2 herein.

1.2.4.2 The government will provide, at no cost to the contractor, periodic training in Hazard Communication, Resource Conservation and Recovery Act (RCRA) mandated Hazardous Materials training, Hazardous Waste Accumulation Point Manager training, and periodic security training. The contractor shall maintain detailed records of all government provided training. At its option, the government may provide additional training directly related to installation resource protection or environmental compliance on the installation.

1.2.4.3 The contractor shall establish a program of on-the-job-training designed to familiarize and develop the proficiency of employees with the operation and maintenance of the various test machinery, test and support equipment, control consoles and data acquisition equipment which comprise the LGTF. On-the-job-training activities will not interfere with the accomplishment of on-going test support efforts or facility maintenance actions, but may be conducted in a complementary manner with on-going work efforts.

1.2.5 **Top Management Meetings.** Meetings may periodically be held between top level base personnel and contractor management to discuss contract status. The CO will notify the contractor in writing at least 5 days in advance of the place and time of required meetings.

1.3 QUALITY CONTROL:

1.3.1 **Quality Control Program.** In compliance with contract clauses E-41, "Inspection - Time-and-Material and Labor-Hour, and E-35, "DD Form 1423 Data Inspection and Acceptance" the contractor shall establish and maintain a complete Quality Control Plan to ensure the requirements of this contract are provided as specified. The CO will notify the contractor of acceptance or required modifications to the plan before the contract start date. The contractor shall make appropriate modifications (at no additional cost to the government) and obtain acceptance of the plan by the CO before the first operational performance period.

1.3.2 **Quality Control System.** The contractor shall establish a Quality System in compliance with the requirements of ISO/IEC GUIDE 25:1990, *General requirements for the competence of calibration and testing laboratories*, and ISO 9001:1994, *Quality systems – Model for quality assurance in design, development, production, installation and servicing*. ISO GUIDE 25 requirements shall apply to all aspects of LGTF test operation, calibration, and facility maintenance. ISO 9001 requirements shall apply to critical design processes tasked to the contractor under Sections C-5.2.1 – C-5.2.6 herein. Additionally, the contractor shall implement a quality system for computer software based on the *Software Capability Maturity Model* (SW-CMM) promulgated by the Software Engineering Institute (SEI) of Carnegie Mellon University. The contractor shall comply with SEI Level 2 within 6 months after contract award, and shall comply with SEI Level 3 within 18 months after contract award. The contractor shall develop an acceptable quality policy, quality system, and quality practices for the LGTF program, and shall document these considerations in a Quality Manual specifically designed for the requirements of this PWS. The contractor shall submit application for ISO registration through an accredited registrar as soon as practicable during the basic contract performance period, and shall strive to obtain registration within 12 months after contract award. The contractor shall satisfy all quality system requirements within 18 months after contract award, and shall maintain these standards for the entire duration of the contract.

1.4 QUALITY ASSURANCE. According to contract clause E-41, "Inspection and Acceptance" the government will evaluate the contractor's performance under this contract. For those tasks listed on the PRS (Technical Exhibit 1), the QAE or evaluators will follow the methods of surveillance specified in the contract. All surveillance observations will be recorded by the government. When an observation indicates defective performance, the QAE will require the contract manager or representative to initial the observation indicating acknowledgment of deficiency. The initialing of the observation does not necessarily constitute contractor concurrence with the observation, only acknowledgment that the contractor has been made aware of the defective performance. Government surveillance of tasks not listed in the PRS or by methods other than those listed in the PRS (such as provided for by the Inspection and Acceptance clause) may occur during the performance period of this contract. Such surveillance will be done according to standard inspection procedures or other contract provisions. Any action taken by the CO as a result of surveillance will be according to the terms of this contract.

1.4.1 **Performance Evaluation Meetings.** The contract manager may be required to meet at least weekly with the QAE and the CO during the first month of the contract. Meetings will be as often as necessary thereafter as determined by the CO. However, if the contractor requests, a meeting will be held whenever a Contract Deficiency Report is issued. The written minutes of all performance evaluation meetings shall be prepared by the government and signed by the contract manager, CO, and QAE. Should the contractor non-concur with the minutes, the contractor shall so state any areas of non-concurrence in writing to the CO within 10 calendar days of receipt of the signed minutes. The minutes will be included in the contract file.

1.4.2 **Quality Assurance Evaluator:**

1.4.2.1 The QAE is a representative of the CO and will participate in the administration of this contract except where exemptions have been approved by the Functional Area Chief (FAC) and the base CO according to AFMAN 64-108, paragraph 1.4. Subsequent to contract award, the identity of the QAE with a brief resume of his/her duties and authority will be promptly furnished to the successful bidder/offeror.

1.4.2.2 The QAE or alternates will inform the contract manager in person when discrepancies occur and will request corrective action. The QAE or alternates will make a notation of the discrepancy on their tally/surveillance checklist with the date and time the discrepancy was noted and will request the contract manager (or authorized representative) to initial the entry on the tally checklist.

1.4.2.3 Any matter concerning a change to the scope, prices, terms or conditions of this contract shall be referred to the CO and not to the QAE.

1.4.2.4 The services to be performed by the contractor during the period of this contract shall at all times and places be subject to review by the CO or authorized representatives.

1.5 PHYSICAL SECURITY. The contractor shall be responsible for safeguarding all government property provided for contractor use. At the close of each work period, government facilities, property, and materials shall be secured. The contractor shall conform to the provisions of AFI 31-209 for safeguarding the government-furnished facilities and material contained therein.

1.5.1 **Key Control.** The contractor shall establish and implement methods of ensuring that all keys/key cards issued to the contractor by the government are not lost or misplaced and are not used by unauthorized persons. NOTE: All references to keys include key cards. No keys issued to the contractor by the government shall be duplicated. The contractor shall develop procedures covering key control that shall be included in the Quality Manual. Such procedures shall include turn-in of any issued keys by personnel who no longer require access to locked areas.

1.5.1.1 The contractor shall immediately report the occurrences of lost or duplicate keys to the CO.

1.5.1.2 In the event keys, other than master keys, are lost or duplicated the contractor shall, upon direction of the CO, re-key or replace the affected lock or locks; however, the government, at its option, may replace the affected lock or locks or perform re-keying. When the replacement of locks or re-keying is performed by the government, the total cost of re-keying or the replacement of the lock or locks shall be deducted from the monthly payment due the contractor. In the event a master key is lost or duplicated, all locks and keys for that system shall be replaced by the government and the total cost deducted from the monthly payment due the contractor.

1.5.1.3 The contractor shall prohibit the use of government issued keys by any persons other than the contractor's employees. The contractor shall prohibit the opening of locked areas by contractor employees to permit entrance of persons other than contractor employees engaged in the performance of assigned work in those areas, or personnel authorized entrance by the CO.

1.5.2 **Lock Combinations.** The contractor shall establish and implement methods of ensuring that all lock combinations are not revealed to unauthorized persons. The contractor shall ensure that lock combinations are changed when personnel having access to the combinations no longer have a need to know such combinations. These procedures shall be included in the contractor's Quality Manual.

1.6 HOURS OF OPERATION. The contractor shall perform work required under this contract during the following hours:

FIRST SHIFT: 0715 HRS TO 1600 HRS

SECOND SHIFT: 1515 HRS TO 2400 HRS

THIRD SHIFT: 2315 HRS TO 0800 HRS

1.6.1 The normal facility hours of operation will be three (3) shifts, Monday through Friday, except national holidays. The contractor may work, with prior approval of the CO, extended hours to ensure timely completion of work at no additional cost to the government. If fluctuations in workloads require an adjustment to the work shift, the contractor shall make the work shift adjustment. For example, a peak workload or surge requirement may require the addition of weekend shifts, while a slack workload may require only a one shift or two shift operation, Monday through Friday. All requirements for work shift adjustment shall be determined by the QAE/CO under the existing funding and Delivery Order limitations, with the assistance of the contract manager, a minimum of five (5) working days prior to the actual adjustment.

1.6.1.1 Recognized Holidays. The contractor will observe 11 holidays, as stated herein. The contractor is not required to provide service on the following national holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. If the holiday falls on a Saturday, it is observed on Friday. If the holiday falls on Sunday, it is observed on Monday. The contractor may observe the following federal holidays: Martin Luther King Day, President's Day, Columbus Day, and Veteran's Day. Additionally, the contractor will observe one floating holiday. In lieu of mandatory observance of the four federal holidays stated above, the contractor may consider these days normal work days, and substitute four floating holidays.

1.6.1.2 Christmas Week. Normally, the contractor will not be required to provide full service from Christmas Day through New Year's Day, except as provided under paragraph 1.6.2, below. Under normal peacetime circumstances, the contractor will be encouraged to adopt a liberal policy of annual leave and floating holiday use during this one week period.

1.6.1.3 Overtime Work. When workload or critical operating schedules dictate, overtime may be required by the QAE. Overtime is understood as all authorized time worked in excess of forty (40) hours per week, and up to eight (8) hours on a Holiday, Saturday or Sunday. Prior to working any overtime, the contractor shall obtain approval from the CO through the QAE. A written request for overtime shall include the personnel classifications, maximum number of hours to be worked, and a description of the work required.

1.6.1.4 Base and Facility Closure. In the event of Base and/or Facility closure due to inclement weather, power outages, emergencies or other unforeseen circumstances (late arrival, partial or full day closure) whereby contractor personnel are not permitted access to the Base or work site, the QAE/CO will determine the hours required of contractor personnel. The contractor shall be paid only for time actually worked unless otherwise determined by the CO.

1.6.2 **Emergency Services.** On occasion, services may be required to support an activation or exercise of contingency plans outside the normal duty hours described above. The contractor's responsibilities for emergency support are described in Section C-5.

1.7 CONSERVATION OF UTILITIES. The contractor shall instruct employees in utilities conservation practices. The contractor shall be responsible for operating under conditions which prevent the waste of utilities, which shall include the following:

1.7.1 Lights shall be used only in areas where and when work is actually being performed.

1.7.2 Mechanical equipment controls for heating, ventilation, and air conditioning systems shall not be adjusted by the contractor or by contractor employees unless authorized.

1.7.3 Water faucets or valves shall be turned off after the required usage has been accomplished.

1.7.4 Government telephones shall be used only for official government business.

1.8 RECORDS. The contractor shall be responsible for creating, maintaining, and disposing of only those government required records that are specifically cited in this PWS or required by the provisions of a mandatory directive listed in Section C-6. If requested by the government, the contractor shall provide the original record, or a reproducible copy of any such record within 5 workdays of receipt of the request.

1.9 ENVIRONMENTAL CONTROLS:

1.9.1 **Compliance with Laws and Regulations.** The contractor shall be knowledgeable of and comply with all applicable interstate, Federal, State, and local laws, regulations, and requirements regarding environmental protection. In the event environmental laws/regulations change during the term of this contract, the contractor is required to comply as such laws come into effect. If there is an increase or decrease in cost as a result of the change, the contractor shall inform the CO pursuant to notice requirements of FAR 52.243-3 and negotiate a modification to the contract.

1.9.2 **Notification of Environmental Spills.** If the contractor spills or releases any substance contained in 40 CFR 302 into the environment, the contractor or its agent shall immediately report the incident in compliance with procedures detailed in the *Landing Gear Test Facility – Spill Prevention Plan*. This plan will be provided to the contractor either prior to award upon request or after contract award. The liability for the spill or release of such substances rests solely with the contractor and its agent.

1.9.3 **Material Storage and Use.** The contractor shall follow manufacturer's guidelines and professional recommendations for control of humidity, temperature, cleanliness, and materials handling, including the storage, handling, and use of hazardous materials.

1.10 GOVERNMENT OBSERVATIONS. Government personnel, other than COs and QAEs, may from time-to-time, with CO coordination, observe or inspect contractor operations. However, these personnel may not interfere with contractor performance.

1.11 SAFETY REQUIREMENTS. In performing work under this contract, the contractor shall:

1.11.1 Conform to the safety requirements contained in the contract for all activities related to the accomplishment of the work.

1.11.2 Take such additional immediate precautions as the CO may reasonably require for safety and mishap prevention purposes.

1.11.3 Provide protection to government property to prevent damage during the period of time the property is under the control or in the possession of the contractor.

1.11.4 Include a clause in all subcontracts to require subcontractors to comply with the safety provisions of this contract.

1.11.5 Record and report promptly (within 1 hour) to the CO or QAE, all available facts relating to each instance of damage to government property or injury to either contractor, government or customer personnel.

1.11.6 In the event of an accident/mishap, take reasonable and prudent action to establish control of the accident/mishap scene, prevent further damage to persons or property, and preserve evidence until released by the accident/mishap investigative authority through the CO.

1.11.7 If the government elects to conduct an investigation of the accident/mishap, the contractor shall cooperate fully and assist government personnel in the conduct of the investigation until the investigation is completed.

1.11.8 Include a clause in each applicable subcontract requiring the subcontractor's cooperation and assistance in accident/mishap reporting and investigation.

1.11.9 Comply with the safety provisions listed in the technical publications within the PWS.

1.11.10 The contractor shall not allow test machinery to operate at any time when unattended by a qualified operator. The contractor shall ensure that a minimum of 2 qualified operators are present and on duty within the LGTF at any time that test machinery is operated.

1.11.11 The contractor shall coordinate any particularly hazardous testing requirements with the Wright Site Safety Office and/or the WPAFB Fire Department, as appropriate, prior to conducting any especially hazardous testing operation. In addition, the contractor shall coordinate with the WPAFB Fire Department prior to conducting any maximum energy or RTO (rejected takeoff) brake test cycle. The contractor shall notify the QAE of the planned time for the hazardous testing in advance of the required outside contacts.

1.11.12 The contractor shall request and obtain Material Safety Data Sheets (MSDSs) every time that any material is purchased or otherwise acquired for use within the LGTF. The contractor shall maintain an MSDS master file on-site, and shall provide an information copy of each MSDS to the QAE. The contractor shall post a duplicate copy of the MSDS master file in a public location such that it will be available at all times for review by all contractor and government personnel assigned to the LGTF.

1.12 ORIENTATION PERIOD: RESERVED (See Clause I-479, Continuity of Services, FAR 52.237-3)

1.13 PHASE OUT: RESERVED (See Clause I-479, Continuity of Services, FAR 52.237-3)

SECTION C-2

DEFINITIONS

2.1 GENERAL DEFINITIONS:

2.1.1 **Defective Service.** A service output that does not meet the standard of performance specified in the contract for that service.

2.1.2 **Lot.** The total number of service outputs in a surveillance period, as defined in the Performance Requirements (PR) column of the PRS.

2.1.3 **Performance Requirement (PR).** The point that divides acceptable and unacceptable performance of a task according to the PRS and the Inspection of Services clause. In the case of surveillance by random sampling, the PR is the maximum number of defectives in the random sample chosen that may occur before the government will effect the price computation system according to the PRS and the Inspection of Services clause. When the method of surveillance is other than random sampling, the PR is the number of defectives or maximum percent defective in the lot before the government will effect the price computation system according to the PRS and the Inspection of Services clause.

2.1.4 **Performance Requirements Summary (PRS).** A listing of the service outputs under the contract that are to be evaluated by the government QAE on a regular basis to assure contract performance standards are met by the contractor, the surveillance methods to be used for these outputs, and the PR of the listed outputs.

2.1.5 **Quality Assurance.** A planned and systematic pattern of all actions necessary to provide confidence to the government that adequate technical requirements are established; products and services conform to established technical requirements; and satisfactory performance is achieved. For the purpose of this document, Quality Assurance refers to actions by the government.

2.1.6 **Quality Assurance Evaluator (QAE).** A functionally-qualified government person responsible for surveillance of contractor performance.

2.1.7 **Quality Assurance Surveillance Plan (QASP).** An organized written document used for quality assurance surveillance. The document contains specific methods to perform surveillance of the contractor.

2.1.8 **Quality Control.** Those actions taken by a contractor to control the production of outputs to ensure that they conform to the contract requirements.

2.1.9 **Random Sampling.** A sampling method where each service output in a lot has an equal chance of being selected for quality assurance surveillance.

2.1.10 **Sample.** A sample consists of one or more service outputs drawn from a lot for quality assurance surveillance. The number of outputs in the sample is the sample size.

2.1.11 **Sampling Guide.** The part of the surveillance plan which contains all the information needed to perform surveillance of the service outputs for each task in the PRS.

2.1.12 **Indifference Quality Level (IQL) Sampling Plan.** A sampling plan which minimizes the risk to the government of acceptance of excessive error rates while also minimizing the risk to the contractor of rejection of acceptable performance. In such a plan the government and the contractor equally share in the probability of acceptance or rejection of a service with marginal error rates.

2.1.13 **First Operational Performance Period.** The interval of time during which the contractor is solely responsible for accomplishment of all activities set forth in the PWS through day-to-day management of the required service. This period excludes the orientation period and any interval between award of the contract and commencement of performance.

2.1.14 **Periodic Surveillance.** A sampling method where samples are selected for inspection on a basis other than 100-percent inspection or random sampling, such as a scheduled basis when the QAE chooses the location and time in other than a statistically random manner.

2.1.15 **Customer Complaints.** A formalized written procedure by which the end customer of the contractor's services may register complaints with the QAE and CO about defective services. The QAE investigates all customer complaints received. Validated customer complaints may be used by the CO as a basis for actions against the contractor under the Inspection of Services clause.

2.2 TECHNICAL DEFINITIONS:

2.2.1 **Task Order.** Technical tasking issued by the QAE for the purpose of accomplishing work for a facility customer.

2.2.2 **Task Order Description.** A technical document which accompanies a Task Order describing the work to be accomplished and specifying the facility customer's technical requirements in full.

2.2.3 **Task Estimate.** Data generated by the contractor which estimates the total costs in labor, materials, subcontracting, travel, and test machine carriage occupancy to accomplish the work specified by a Task Order.

2.2.4 **Statement of Capability.** A document generated by the government including data from the Task Estimate which states the technical capabilities of the testing facility to accomplish a Task Order, delineates a technical approach to accomplish the tasks, and includes itemized cost and schedule data.

2.2.5 **Testing Agreement.** An agreement for commercial sale of testing services negotiated between the Air Force and a private entity under the statutory authority of 10 U.S.C. § 2539b.

2.2.6 **Cooperative Research and Development Agreement.** An agreement between the Air Force Research Laboratory and a collaborating party under the statutory authority of 15 U.S.C. § 3710a, *The Stevenson-Wydler Technology Innovation Act of 1980*, Air Force Policy Directive 61-3, *Domestic Technology Transfer*, and Air Force Instruction 61-302, *Cooperative Research and Development Agreements*.

2.2.7 **Technical Support Agreement.** An informal agreement between AFRL and another Air Force, DoD, or U.S. Government agency for support services, usually authorized under the Economy Act.

2.2.8 **Core Project.** The sum total of all routine operational and maintenance services delivered during a contract performance period; totally exclusive of all tasks ordered for test program support, engineering support, special projects, and facility upgrading efforts.

2.2.9 **Core Project Estimate.** Data generated by the contractor which estimates the total costs in labor, materials, subcontracting, and travel to accomplish Core Project tasks for each contract performance period.

2.2.10 **Facility Customer.** Any Air Force or DoD component activity, any federal executive agency of the United States Government, any private entity, or any foreign-owned or foreign government entity authorized by the Air Force to use the services of the facility, and who provides technical specifications and funding for services.

2.2.11 **Private Entity.** An individual or firm, labor organization, partnership, association, corporation, university or not-for-profit center, or a governmental unit of the United States or its territories.

2.2.12 **Proprietary Information.** Information which embodies trade secrets or which is confidential technical, business or financial information provided that such information: (a) is not generally known, or is not available from other sources without obligation concerning its confidentiality; (b) has not been made available by the owners to others without obligation concerning its confidentiality; (c) is not described in an issued patent or a published copyrighted work or is not otherwise available to the public without obligation concerning its confidentiality; or (d) can be withheld from disclosure under 15 U.S.C. § 3710a(c)(7)(A) & (B) or 10 U.S.C. § 2539b(b) and the Freedom of Information Act, 5 U.S.C. § 552 et seq; and (e) is identified as such by labels or markings designating the information as proprietary.

2.2.13 **Test Machine Carriage.** Any test station or test cell associated with any of the testing machines located in the Landing Gear Development & Test Facility and listed in Section C-3.1.1

2.2.14 **Carriage Occupancy Hour.** Actual test machine occupancy time during scheduled work shifts starting with test article set-up and installation and ending with test article tear-down and removal.

2.2.15 **Earned Carriage Hour.** Carriage Occupancy Hours including time while test articles are being installed, tested, cooling between test cycles to prescribed recycle temperature, awaiting data review, decisions, and/or direction by the facility customer, and including test article tear-down and removal. Delays due to preventive or unscheduled maintenance down time, delays caused by contractor scheduling or resource utilization conflicts, and any other delays caused by the government or the contractor are not included and are not charged to the facility customer.

SECTION C-3

GOVERNMENT-FURNISHED PROPERTY AND SERVICES

3.0 GENERAL. The government shall provide, without cost, the facilities, equipment, materials, and/or services listed below or in Technical Exhibit 5.

3.1 GOVERNMENT-FURNISHED PROPERTY:

3.1.1 **Facilities.** The government shall furnish and/or make available facilities described in Technical Exhibit 5a. Government facilities have been inspected for compliance with OSHA. Any hazards for which workarounds have been established are included in Technical Exhibit 5a. The government will correct these hazards according to base wide government developed plans of abatement taking into account safety and health priorities. A higher priority for correction will not be assigned to the facilities provided hereunder merely because of this contract initiative. The identification of any hazardous conditions does not warrant or guarantee that no other possible hazards exist, or that the workaround procedures currently employed will be adequate to meet the responsibilities of the contractor. Compliance with OSHA and other applicable laws and regulations for the protection of employees is exclusively the obligation of the contractor, and the government will assume no liability or responsibility for the contractor's compliance or noncompliance with such requirements, with the exception of the aforementioned responsibility to make corrections according to approved plans of abatement subject to base-wide priorities. Prior to any modification of the facilities performed by the contractor at his or her expense, the contractor must give the CO documentation describing, in detail, the modification requested. No alterations to the facilities shall be made without specific written permission from the CO; however, in the case of alterations necessary for OSHA compliance, such permission shall not be unreasonably withheld. The contractor shall return the facilities to the government in the same condition as received, fair wear and tear and approved modifications excepted. These facilities shall only be used in the performance of this contract.

3.1.2 **Government-Furnished Equipment.** The government shall provide the contractor property listed in Technical Exhibit 5b.

3.1.2.1 Equipment Inventory. An inventory of government-furnished equipment must be done not later than 5 calendar days prior to the start of the first operational performance period., within 10 calendar days of the start of any option periods, and not later than 10 calendar days before completion of the contract period (including any option periods). The contractor and a government representative (GR), identified by the CO, shall conduct a joint inventory of all government-furnished equipment listed in Technical Exhibit 5b and the contractor shall sign a receipt for all equipment provided by the government. The contractor and a GR (identified by the CO) shall jointly determine the working order and condition of all equipment. Items of equipment missing or not in working order shall be recorded and the CO notified in writing. The government will replace missing items and repair all items not in working order or the CO will direct the contractor to replace the missing item(s) or accomplish the repair and the contractor will be reimbursed therefor. The GR will give disposition instructions for items beyond repair. The contractor and the GR shall certify their agreement as to the working order of the equipment. If the contractor does not participate in the inventory, the contractor must accept as accurate the listing and stated condition of equipment provided by the government. If the contractor participates in the inventory, but does not agree with the GR's determination as to the working order of the equipment, this failure of the contractor to agree on working order and defectives shall be treated as a dispute pursuant to the clause of this contract entitles "Disputes."

3.1.2.2 Obtaining Replacement of Government-Furnished Equipment. The contractor shall submit requests for replacement of government-furnished equipment to the QAE for processing. Such requests shall specify the reason for the replacement request.

3.1.2.3 Property Accountability. By completion or extension of the contract, a joint inventory of property shall be conducted by the contractor and a GR. The contractor shall be liable for loss or damage to government furnished property beyond fair wear and tear according to the clause of the contract, "Government Furnished Property." Compensation shall be effected either by reduced amounts owed to the contractor or by direct payment by the contractor; the method to be determined by the CO. All property in need of repairs/maintenance shall be repaired or maintained by the contractor within 30 days of discovery, but before the joint inventory is made. All repairs/maintenance not performed by the contractor shall be done at the government's option and at the contractor's expense. In the case of damaged property, the amount of compensation due the government by the contractor shall be the actual cost of repair, provided such amount does not exceed the economical repair value (75 percent of the costs to replace such item). In the case of items lost or damaged beyond economical repair, the amount of the contractor's liability shall be the depreciated replacement value of the item to be determined by the CO. Any failure of the contractor to agree with such determination shall be treated as a dispute pursuant to the clause of this contract entitled "Disputes."

3.1.2.3.1 High Value Items. In the case of loss or damage beyond economical repair to certain high value items (value of $1,000 or more) listed in Technical Exhibit 5, the amount of compensation which the contractor is liable to pay the government shall be calculated according to the following formula:

C = (RV-AS) – (LE((RV-ES)/EL))

Where:

C = Compensation

RV = Property Record Value (as shown in Technical Exhibit 5)

AS = Actual Salvage Value (determined at time of loss or damage)

ES = Estimated Salvage Value (The estimated salvage value is obtained by using Defense Property Disposal Office percentage-of-cost data if available, or the best estimate from local market conditions. Estimated salvage value is necessary because it is used in determining Total Accrued Depreciation (bracketed portion of the formula).)

EL = Estimated Life (Total estimated from new to planned salvage.) (NOTE: ESTIMATED LIFE IS NOT NECESSARILY THE SAME AS DEPRECIABLE LIFE. ESTIMATE THE USEFUL LIFE OF THE PROPERTY.)

LE = Life Elapsed (Estimated Life less Remaining Life)

3.1.2.3.2 Disposition of Property. When government-furnished property is determined to be beyond economical repair (as defined in paragraph 3.1.2.3 above) it shall be certified by the QAE as condition condemned and reported to the property administrator for disposition. Upon completion of the contract, all remaining government property shall be reported to the CO according to FAR 45.6.

3.1.2.4 Property Leased by the Government. The government will maintain and repair property leased/rented by the government and provided to the contractor except that in the case of loss or damage beyond fair wear and tear, the contractor's liability shall be to reimburse the government for 100 percent of all expense incurred. The provisions of the government lease agreements setting forth liability for loss or damage to leased equipment will be made available for the contractor's inspection upon request to the CO. Property leased by the government which will be provided to the contractor is listed in Technical Exhibit 5d.

3.1.3 **Government Furnished Materials.** The government will furnish the materials listed in Technical Exhibit 5c for performance of services by the contractor for the duration of the contract, including option periods. The initial stock of materials shall be inventoried not later than 5 workdays before contract start and by the contractor and a GR designated by the CO. Any missing items shall be annotated on the inventory and the CO notified. Any disagreements between the contractor and the GR on the materials inventory shall be treated as a dispute under the contract clause entitled "Disputes." The contractor shall be responsible for keeping enough materials on hand for the performance of the contract according to its terms. If additional materials are authorized by the contract, the contractor shall request such additional materials by providing a written request to the QAE at least 60 calendar days before the required delivery date of the materials. At the conclusion of the contract period, including options, the contractor shall return all residual inventory to the government.

3.1.4 **Government-Furnished Records, Files, Documents, and Work Papers.** The government will furnish those records listed in Technical Exhibit 5f. All records, files, documents, and work papers provided by the government or generated in support of this contract are government property and shall be maintained and disposed of per AFPD 37-1, *Air Force Information Management*, AFI 37-138, *Records Disposition – Procedures and Responsibilities*, AFMAN 37-123, *Management of Records*, and AFMAN 37-139, *Records Disposition Schedule*. At the time of disposition the contractor shall box, label contents, and turn them over to the QAE. If there is no QAE, the records will be turned over to the CO.

3.2 GOVERNMENT-FURNISHED SERVICES:

3.2.1 **Utilities.** The government will furnish electricity, water, sewage, and steam heating for the facility.

3.2.2 **Postal Service.** The government will provide on-base mail distribution and United States Postal Service and United Parcel Service limited to official government mail matter required under the terms of this PWS.

3.2.3 **Telephone.** The government will provide telephone service consisting of installed telephone lines and ITT 8-button and 16-button telephone units in all laboratory and contractor office areas. The government will provide access to 3 installed commercial private lines distributed through the facility via an installed ITT 3100 telephone system. The contractor shall subcontract with the local telephone utility for the use of these lines and shall be responsible for all charges incurred. Additionally, the government will provide access to outgoing WATS and DSN service for long distance communications with facility customers. Telephone use by contractor personnel shall be limited to matters related to the performance of this contract. The government will reimburse the contractor for all commercial telephone charges incurred in the conduct of official business under this contract.

3.2.4 **Custodial Service.** The government will provide custodial service to the extent provided in the Base Custodial Contract for the facility.

3.2.5 **Refuse Collection.** The government will provide for refuse collection service. The government will provide one dumpster located at the southeast corner of the building 31 facility, including weekly collection service.

3.2.6 **Real Property Maintenance.** The government will provide maintenance and repair of the real property facility. The contractor will obtain maintenance service by calling the Civil Engineering Service Desk at 257-6764 and providing the required information.

3.2.7 **Base Civil Engineering.** The government will provide fire prevention and protection, inspection and maintenance of government-furnished fire extinguishers and systems, pest control, and grounds maintenance. WPAFB Fire Department is reached in an emergency by dialing 911 from any DMATS telephone line, and for routine calls can be reached by dialing 257-6767.

3.2.8 **Emergency Medical Service.** The government will provide emergency medical treatment and emergency patient transportation service for contractor personnel who are injured or become critically ill during the performance of this contract. The contractor shall reimburse the government for the cost of medical treatment and patient transportation service at the current inpatient or outpatient treatment rate, as appropriate.

3.2.9 **Security Forces.** The government will provide on-base Security Forces service. The contractor will obtain Security Forces service by calling 911 for emergencies or 257-6516 for routine support.

3.2.10 **Automatic Data Processing and Network Access.** The government will provide the Automatic Data Processing Equipment (ADPE) listed in Technical Exhibit 5b, and will provide access to the internet and e-mail through the Air Vehicles Directorate local area network.

3.2.11 **Transportation.** Base taxi and shuttle bus services may be utilized by the contractor in support of tasks specified by the PWS.

3.2.12 **Property Disposal.** The local Defense Material Reutilization Office (DMRO) will dispose of all items of excess equipment and property determined to be salvageable by the Property Administrator.

3.3 VEHICLES. The government will provide, for the contractor's use in performance of this contract, the vehicles listed in Technical Exhibit 5e. Vehicles shall be managed according to AFMAN 24-309, *Vehicle Operations*, AFI 24-301, *Vehicle Operations*, and AFI 24-302, *Vehicle Maintenance Management*. The procedures specified are in addition to those required by the Government Property clause of this contract. A commercial drivers license (CDL) is required if the vehicle exceeds 14,000 pounds gross vehicle weight and AFMAN 24-309 applies. For vehicles under 14,000 pounds gross vehicle weight, the driver is required to possess a valid State of Ohio drivers license and government drivers license.

3.3.1 **Vehicle Maintenance.** For government-furnished vehicles, the government will provide all scheduled and unscheduled maintenance. The contractor shall perform operator's maintenance and deliver its assigned government-furnished vehicles to the base vehicle maintenance facility for required maintenance. The contractor will be responsible for repair costs which are caused by accident damage, vehicle abuse or other damage beyond fair wear and tear.

3.3.2 **Fuels and Lubricants.** The government will furnish all fuel, engine oil, and related petroleum products for government-furnished vehicles to perform work listed herein.

3.4 PROPERTY CONTROL PROCEDURES. The contractor shall prepare and present a written property control system to the CO within 30 days after contract award or at the pre-performance conference, whichever is later. The contractor's plan shall be prepared according to, and shall meet the requirements of FAR 52.245-5.

3.5 FORMS AND PUBLICATIONS. The government will provide forms and publications expressly required to perform the work in this PWS. The government will provide custodian and alternate training for forms and publication management.

SECTION C-4

CONTRACTOR-FURNISHED ITEMS AND SERVICES

4.0 GENERAL INFORMATION. Except for those items or services specifically stated to be government-furnished in Section C-3, the contractor shall furnish everything required to perform this contract according to all its terms.

4.1 MINIMUM QUALITY STANDARDS. Reserved.

4.2 GOVERNMENT REIMBURSEMENT FOR ITEMS. The government will reimburse the contractor for materials purchased in the performance of this contract in accordance with Section C-5.1.4 herein.

SECTION C-5

TECHNICAL REQUIREMENTS AND TASKS

5.0 GENERAL INFORMATION. The technical requirements and tasks of this PWS will result in the output of many diverse primary products and by-products. The primary intended products include the maintenance and calibration of the testing facility along with all associated basic operational services delineated in Section C-5.1, and the outputs of the testing, engineering, special project and facility upgrading tasks which are ordered in accordance with Section C-5.2. Several secondary, or by-products are also associated with these services, such as specialized computer software designed and developed for test process control and data acquisition, specialized jigs and test fixtures designed and manufactured in support of testing and calibration requirements, and many other indirect products. The primary metric for measuring facility productivity is Earned Carriage Hours (ECH) as defined at Section C-2.2.15 herein. For the purposes of this PWS, full production or 100% facility utilization shall be defined as sustained test production of 80 ECH per 24 hour period, or 20,000 ECH per year based on an operating schedule of 3 shifts 5 days per week.

5.1 BASIC OPERATIONAL AND MAINTENANCE SERVICES. The contractor shall provide basic services for facility operation and maintenance as prescribed in this Section. The contractor shall maintain each of the testing machines listed in Technical Exhibit 5a at the highest possible state of readiness in order to support government testing requirements in a timely, efficient and competent manner.

5.1.1 **Project Management and Administration.** The contractor shall provide for all project management and administrative support functions required in the performance of this contract, such as: scheduling of activities and milestones; describing status; outlining contractor activity and progress toward accomplishment of objectives; planning, forecasting and making recommendations on funding and funding changes; program planning; and describing in detail the overall results of the effort. (CDRL Data Item # A001, A002, A003, A005, A024)

5.1.1.1 Core Project. The contractor shall plan and establish a project to accomplish all of the services prescribed by Section C-5.1 for each performance period of this contract. The contractor shall plan for managing program product quality for all tasks under this effort. (CDRL Data Item # A004, A006)

5.1.1.2 Program Organization. The contractor shall develop an organizational structure to facilitate the performance of all services required under this contract. The contractor's organizational structure shall define lines of authority, functional responsibilities, work flow, and alternate lines of authority in the absence of key personnel. The contractor shall document any changes to the organizational structure upon implementation.

5.1.1.3 Personnel Management. The contractor shall exercise management responsibility for all personnel assigned to this contract.

5.1.1.4 Work Order Tracking System. The contractor shall establish a work order tracking system for cost accounting purposes under this contract. The purpose of the work order system shall be to provide visibility to contractor management and to the Government into the detailed labor, material and subcontracting costs incurred in the various facility operational and maintenance tasks of Section C-5.1 as well as the testing, engineering support, special project, and facility upgrading tasks of Section C-5.2.

5.1.1.5 General Test Planning. The contractor shall conduct general test planning and resource estimating, developing master schedules for test machines, equipment and personnel, and estimating costs and schedules for potential facility customers in support of the performance of this contract. (CDRL Data Item # A004)

5.1.1.6 Marketing and Business Development. The contractor shall develop strategies for marketing the testing and engineering support capabilities of the facility to potential Air Force, DoD, NASA, other government, and industry organization customers. Approved marketing activities shall include development and publication of brochures, descriptive summaries of technical capabilities, briefings, internet world wide web pages, and personal visits to customer's locations. In addition, the contractor shall develop cost estimates, work statements, statements of capability, technical support agreements, testing agreements, cooperative research and development agreements, and other support agreements with facility customers. (CDRL Data Item #A023)

5.1.1.7 Operation Security (OPSEC). OPSEC requirements apply to this contract. The Government will notify the contractor of specific actions to be taken to protect activities and operations during the course of this contract. The QAE will identify specific work efforts performed under this contract which are considered by the Government to be OPSEC Sensitive. (CDRL Data Item #A025)

5.1.1.8 THREATCON Activities. The contractor shall establish a systematic training and awareness program to prepare contractor employees to respond appropriately to any THREATCON conditions which may be declared by the local base commander. The contractor shall ensure that all on-site contractor employees assigned to this contract are notified immediately of any change in THREATCON status. During THREATCON Alpha, Bravo, Charlie and Delta alerts, whether related to base training and readiness exercises or actual alerts, the contractor shall give highest priority to activities in support of installation resource protection.

5.1.1.9 Documentation of Activities. The contractor shall document all contract activities performed during the period of contract performance. The contractor shall facilitate Air Force access to all internal data generated in performance of this contract. (CDRL Data Item # A010, A019)

5.1.2 **Scientific and Engineering Services.** The contractor shall provide the following routine scientific and engineering services for facility engineering support, facility computer operations and local area network support, L-Ray shearography system support, and facility upgrading and improvement efforts:

5.1.2.1 Facility Engineering Support. The contractor shall provide multi-disciplined engineering and design expertise in mechanical systems, electrical and electronic systems, AC and DC motors and motor controls, real-time computer systems architecture, hydraulic and pneumatic systems, and servo control systems for LGTF test machinery operation, maintenance and design improvement. The contractor shall exercise complete engineering responsibility for all test machinery and associated support equipment operation and maintenance. In addition, the contractor shall be responsible for the following specific tasks: (1) Maintenance of an up-to-date original drawing file of all test machine designs or modifications to equipment accomplished by the contractor; (2) Researching test standards and specifications, and maintaining contact with industry sources to stay abreast of the latest technical innovations related to landing gear component testing; (3) Development and improvement of general test procedures and techniques in support of LGTF test operations; (4) Preliminary design efforts and feasibility studies directed at finding solutions to test machinery performance and control problems; (5) Detailed design efforts directed at implementing solutions to operational problems. (CDRL Data Item # A011, A012, A013, A014)

5.1.2.2 Computer Operations Support. The contractor shall provide: (1) Operating system installation, maintenance and updating; (2) Layered system software installation, maintenance and updating; (3) Applications software development, modification and maintenance; (4) System and Network management; (5) ADPE hardware and software maintenance; (6) Informal support, including providing access to manuals and technical data, to users (facility customers) of computer systems applications software and networking resources.

5.1.2.2.1 As a minimum, the contractor shall provide expertise in FORTRAN and C programming in the UNIX and Microsoft Windows environment. The contractor shall also provide expertise in IEEE Std 583-1982 (CAMAC), IEEE Std 796-1983 (Standard Microcomputer System Bus), IEEE Std 1014-1987 (VMEbus), and IEEE Std 1155-1992 (VXIbus) in order to support the installed LGTF test process control and data acquisition architectures.

5.1.2.2.2 The contractor shall provide maintenance service for all LGTF computing resources, test process control and data acquisition equipment and software listed in Technical Exhibit 5. The contractor shall maintain equipment and software in the most economical manner, including annual maintenance agreements, upgrades to current releases, and time and materials service.

5.1.2.2.3 The contractor shall issue and maintain user accounts, and shall provide instruction and training to users in the use of layered software products and third party software programs.

5.1.2.2.4 The contractor shall fully comply with the requirements of AFPD 33-2, *Information Protection*, in the processing of sensitive unclassified information on LGTF computer systems.

5.1.2.2.5 The contractor shall prepare and submit C4 System Requirements Documents (CSRD) in accordance with the procedures of AFI 33-103, *Requirements Development and Processing*, for all Automated Data Processing Equipment (ADPE) hardware and software proposed for acquisition under this contract.

5.1.2.3 L-RAY Shearography System Support. The contractor shall provide operation, maintenance, calibration and upgrading of the LGTF's L-Ray Shearography system for tire nondestructive inspection. The contractor shall provide fully trained operators of this equipment, qualified to read, analyze, interpret and validate aircraft tire shearography data.

5.1.2.4 General Facility Upgrading. The contractor shall study and recommend improvements to LGTF test machinery, associated support equipment and procedures. Facility upgrading plans conceived by the contractor shall be documented and presented to the QAE. The contractor shall be authorized to implement upgrading plans only when tasked with implementation under Section C-5.2.5 herein. Materials and subcontracting required to accomplish upgrading are subject to the provisions of Section C-5.1.4 herein.

5.1.3 **Technical Services for Facility Maintenance.** The contractor shall establish a program in compliance with AFPD 21-1, *Managing Aerospace Equipment Maintenance*, for the scheduled preventive and unscheduled corrective maintenance of all test machines and support equipment associated with the LGTF and listed in Technical Exhibit 5. The contractor shall document all maintenance actions as prescribed by TO 00-20-2, *Maintenance Data Documentation*. The contractor shall provide for the maintenance and calibration of all Precision Measuring Equipment, instrumentation and test machine carriages. In addition, the contractor shall provide for material inventory, storage and disposal; care of Government vehicles; and facility cleanliness. The contractor shall occasionally: operate material handling vehicles such as trucks, forklifts and cranes; operate overhead hoists and boom cranes; operate welding and cutting equipment; and apply paint and other protective coatings to test machinery and support equipment in performing the specified services. The contractor shall sustain LGTF test and support equipment to the following minimum standards:

Equipment Description	Mission Capable Rate (MCR)
120 Inch 350 MPH Tire Test Dynamometer	90 %
168I 350 MPH Tire Wear Test Dynamometer	85 %
84 Inch 250 MPH Variable Inertia Brake Test Dynamometer	90 %
192 Inch 200 MPH Variable Inertia Brake Test Dynamometer	95 %
66 Inch 120 MPH Variable Inertia Brake Test Dynamometer	95 %
Tire Force Machine	90 %
L-Ray Aircraft Tire Analyzer	95 %
Drop/Impact Towers (1.5K, 10K, 35K, 150K)	90 %
Large Baldwin Load Applicator	90 %
Small Baldwin Load Applicator	90 %
Fatigue Test Machine	90 %
Machine Shop Equipment	95 %
Lab Support Equipment	95 %

MCR shall be calculated on a monthly basis in accordance with the following formula:

MCR = (TH – UH – DH)/(TH – UH) x 100 %, where

MCR = Mission Capable Rate
TH = Total Hours Available (Facility Scheduled Hours of Operation)
UH = Down-time associated with scheduled upgrades to equipment. Upgrades include improvements to machine capabilities beyond pre-contract award condition, such as improvements to machine control, data acquisition, mechanical responsiveness, etc., which have been approved in advance by the government.
DH = Down-time when equipment is inoperable, exclusive of UH. Includes all scheduled maintenance, and time when equipment is undergoing or awaiting unscheduled maintenance.

5.1.3.1 Preventive Maintenance/Preventive Maintenance Inspection (PM/PMI) Program. The contractor shall implement a program for the Preventive Maintenance/Preventive Maintenance Inspection (PM/PMI) of all LGTF test machines and other significant items listed on the PM/PMI inventory. The contractor shall perform PM/PMI on each item of equipment on a daily, weekly, bi-weekly, and/or monthly basis as required by Government-developed procedures for the particular equipment in accordance with its associated manual or operating instructions. The contractor shall develop PM/PMI checklists for each test machine and other GFE provided in Technical Exhibit 5. The contractor shall complete and maintain an AFMC Form 306, *Preventive Maintenance Instruction*, for each item on the PM/PMI Inventory. Each time an inspection has been accomplished, the contractor shall establish new PM/PMI inspection date(s) for the item(s) and annotate the new inspection due date(s) on AFMC Form(s) 306. The contractor shall complete and maintain AFTO Form 95, *Significant Historical Data*, for each item on the PM/PMI Inventory. The contractor shall annotate required information of an historical nature such as when major maintenance has been performed on the item. (CDRL Data Item # A021)

5.1.3.2 Unscheduled Maintenance. The contractor shall provide corrective maintenance for test machinery and other GFP/GFE items and components determined to be inoperative or malfunctioning. The contractor shall provide maintenance service for all mechanical, electrical, analog and digital circuits, servo-control, hydraulic and pneumatic components and subsystems associated with LGTF test and support equipment. The contractor shall document all unscheduled major maintenance procedures. (CDRL Data Item #A021)

5.1.3.3 Precision Measuring Equipment (PME). The contractor shall comply with AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL) Program*, and shall maintain in good working order all Precision Measuring Equipment (PME) provided as GFE for his on-site use. The contractor shall ensure that all PME is properly tagged, cleaned, and in possession of a current calibration tag. The contractor shall establish and maintain a computer database to track PME status, which the contractor shall update as needed to be current. When equipment is due for calibration at the Air Force Precision Measuring Equipment Laboratory (PMEL), the contractor shall place the PME at the location within the LGTF and at the time designated by the QAE for PMEL pick-up. The contractor shall sign for all returning PME and shall update the PME tracking program to reflect the changes.

5.1.3.4 Test Machine Calibration. The contractor shall establish and implement a program for the periodic verification and in-site calibration of all LGTF test machine carriages and measurement equipment in compliance with ISO 10012-1:1992, *Quality assurance requirements for measuring equipment – Part 1: Metrological confirmation system for measuring equipment*, and ISO 10012-2:1997, *Quality assurance for measuring equipment – Part 2: Guidelines for control of measurement processes*. Machine carriages shall be fully calibrated for all loads, moments, pressures, displacements, velocities, angles and any other measured parameters at least annually, or more often if required by manufacturers guidelines. Calibration verification checks shall be conducted at least quarterly. All calibration activities shall be conducted using PME which is current, as prescribed by Section C-5.1.3.3, in order to assure trace-ability of all measured parameters to National Standards. The contractor shall document all calibration activities conducted. (CDRL Data Item # A015)

5.1.3.5 Test and Support Article Inventory Control. The contractor shall establish and maintain a data base system for the inventory and control of all test articles, associated parts, test fixtures and other test support equipment in use, on-hand, and/or received at the LGTF during the performance period of this effort. Inventory records shall be made readily available to the QAE(s) for review upon request.

5.1.3.6 Test and Support Article Storage. The contractor shall provide for the transportation and orderly storage of all inventoried test articles, associated parts, test fixtures and other test support equipment. The contractor shall store inventoried equipment at the locations specified in Technical Exhibit 5a and at future on-base locations to be specified by the Government.

5.1.3.7 Disposal of Excess Material. All material on-site and determined by the QAE to be excess to the operational and maintenance requirements of the LGTF, whether provided as GFE or acquired as a material purchase on this contract, shall be disposed of through the Defense Reutilization and Marketing Office (DRMO). The contractor shall document all facility equipment determined to be excess. (CDRL Data Item #A021)

5.1.3.8 Industrial Gases. The contractor shall provide for the periodic replenishment of industrial gases which are required for the operation and maintenance of the LGTF. Specific gases required include bottled nitrogen, liquid nitrogen, bottled oxygen, bottled acetylene and bottled propane. The contractor shall obtain bottled nitrogen, oxygen, acetylene and propane from commercial sources as a material purchase. The contractor shall obtain liquid nitrogen from the Base Fuel Farm at Building 60, Area C through the Laboratory Material Control Activity (LMCA), in accordance with local procedures provided by the QAE. The contractor shall arrange for the delivery of liquid nitrogen by placing an order with the Base Fuel Farm at 257-2224. The contractor shall provide a qualified operator of the Liquid Nitrogen Dewars to monitor delivery and provide operational services.

5.1.3.9 Use and Care of Government Vehicles. In accordance with Section C-3.3 herein, the contractor shall be authorized the use of all Material Handling Vehicles assigned to the LGTF in performance of the services specified herein. In addition to the requirements of AFMAN 24-309, the contractor shall comply with the following:

5.1.3.9.1 Contractor personnel are required to possess a valid AF Form 2293, *US Air Force Motor Vehicle Operator Identification Card*, before operating any Government material handling vehicle. Contractor personnel obtain the Identification Card by completing AF Form 171, *Request for Drivers Training and Addition to US Government Drivers License*, and processing the form through local channels as defined by the QAE or CO.

5.1.3.9.2 The contractor shall be financially responsible for all damage caused to or caused by his or her operation of any Government vehicle while performing services under this contract.

5.1.3.9.3 The contractor shall exercise care in the use of Government vehicles, and shall be responsible for the following vehicle maintenance actions: (1) Perform a daily inspection of each vehicle at the start of every scheduled work day, annotating and signing AF Form 1800 (Operators Inspection Guide and Trouble Report) for any Government truck provided for his use and AFTO Form 421 (Operators Inspection Guide and Trouble Report for MHE) for material handling equipment. The contractor shall check all fluid levels and adjust as needed. The contractor shall check all vehicle lights and replace as needed. The contractor shall not perform any vehicle maintenance beyond that which is authorized to be done by the operator. When maintenance is required, the contractor shall annotate AF Form 1800 or AFTO Form 421 describing the needed repair and shall drive the vehicle to the Base Vehicle Maintenance Section located at Building 38, Area B or Building 60, Area C. If the vehicle is not operable, the contractor shall arrange for tow truck pickup by telephoning 255-2000. (2) Wash and wax all Government vehicles as required by the QAE or Vehicle Control Officer as part of the corrosion control program. (3) Fill vehicles with fuel when the fuel level is indicated to be at the half-full level or above. The contractor shall drive the vehicle to the fuel farm, located at Building 89, Area B or Building 60, Area C, and shall follow established procedures provided by the QAE to obtain the required fuel. The Government will provide a fuel key-card for each vehicle with the vehicle's operating keys. (4) Sign the Daily Trip Sheet, located on each vehicle, each time the vehicle is used. The following information shall be recorded by the using personnel: Name, Date, Time Out, Time In, Destination, Beginning Mileage and Ending Mileage.

5.1.3.10 Facility Cleanliness. The contractor shall maintain all LGTF work areas, testing machines and equipment in a clean and orderly fashion. The following cleanliness standards shall apply: (1) Trash accumulated in LGTF work areas not serviced by the Base Janitorial Service Contractor shall be emptied a minimum of three times per week. In addition, trash accumulated in areas where meals are taken shall be emptied daily. Trash shall be emptied into the dumpster located outside of the southeast corner of Building 31. (2) The LGTF shop floor shall be maintained in a cleaned condition. After the floor has been cleaned, the entire surface including corners and abutments shall be free of dirt, litter, dust, cobwebs, and foreign debris/ (3) All work areas, work benches, table tops and other flat working surfaces shall be wiped free of dirt and debris daily, or more often if needed to maintain cleanliness. (4) All hand tools shall be cleaned and properly stored when not in use and at the end of each work shift. (5) All small portable GFE items shall be cleaned and placed in storage containers when not in use. (6) All large test machines and fixed GFE items shall be cleaned and dusted monthly.

5.1.4 **Materials and Subcontracting.** The contractor shall provide a purchasing function for acquiring materials and subcontracting as required to perform the operational, maintenance and upgrading requirements of this contract. The contractor shall provide all required materials and subcontracting in an expeditious manner, in order to maintain equipment with the minimum down time and to support tasked efforts without adverse impact to schedules.

5.1.4.1 Purchase Approval Provision. Prior to purchases by the contractor for any materials or equipment, the contractor shall obtain approval from the Contracting Officer. The Contracting Officer may assign limited authority to the QAE for approval. Such assignment will be made in writing by the Contracting Officer and will specify all limitations and restrictions of the approval authority, to include dollar amounts of approval. Reimbursement for purchased items within the scope of the contract, shall only be made after the contractor has proven that payment has been made for such items. Upon reimbursement, all purchased items become the property of the Government.

5.1.4.2 Materials. The contractor shall be authorized to purchase materials, as required, to fulfill the operational, maintenance and upgrading tasks specified herein, and as required to support efforts ordered under Section C-5.2. The contractor shall be responsible for tracking, safeguarding and maintaining purchased items until the termination of this contract. The contractor shall establish a system to account for all such items, and shall be responsible for producing the items upon request by the QAE or other authorized Government Representative (GR). The contractor shall be responsible for replacement or repair of such items if lost or damaged due to negligence on the contractor's part.

5.1.4.3 Subcontracting. The contractor shall be authorized to subcontract for special services which cannot be performed by the personnel and equipment regularly assigned to the LGTF. Special services may be required of laboratories, equipment vendors, riggers and movers, or engineering and technical organizations. The contractor shall document the work to be performed and detail the technical specifications for all contemplated subcontracting, subject to Air Force review prior to release for Invitations for Bids. The contractor shall be paid for the actual cost of such efforts, plus subcontract handling rate, if included in the contract schedule.

5.2 TEST PROGRAM SUPPORT, ENGINEERING SUPPORT, SPECIAL PROJECTS, AND FACILITY UPGRADING EFFORTS. The contractor shall conduct and perform test programs, engineering studies, special projects and facility upgrading efforts as prescribed by technical specifications provided by the facility customers who order and provide funding for these services.

5.2.1 **Task Order Assignment.** Work efforts encompassing the areas of test program support, engineering studies, special projects and facility upgrading shall be assigned to the contractor by the issuance of a "Task Order" from the QAE. Task Order assignments will be communicated to the contractor in written form. Upon receipt of the order, the contractor shall respond according to the procedures outlined in the following subparagraphs:

5.2.1.1 Task Priority Rating. The government will assign a task priority rating to each task order assigned. The contractor shall plan resource allocations and schedule for each task based on the rating of the task in relation to all other tasked efforts which will compete for the use of similar human resources and GFE.

5.2.1.2 Contractor's Task Estimate. Within ten (10) working days after receipt of a routine task order, the contractor shall estimate the task, detailing the labor, materials, and schedule required to perform the work requested. For non-routine task order requests involving complex technical requirements, the contractor shall respond with a written task estimate within 30 calendar days after receipt. If additional time is necessary for the preparation of a responsive task estimate, the contractor shall submit a written request to the QAE for a time extension, documenting valid reasons for the contractor's inability to meet the original due date. (CDRL Data Item #A004)

5.2.1.3 Work Order. Within three (3) working days after receipt of an approved "Work Order" (WO) issued by the QAE, the contractor shall commence work to achieve the quality and workmanship standards delineated in the WO and within the estimated cost and time frame incorporated therein. The WO will identify the contract Delivery Order and funding citation under which the task shall be conducted.

5.2.2 **Test Program Support.** The contractor shall support testing of aircraft landing gear components, including tires, wheels, brakes, struts and other sub-components, integrated landing gear system assemblies, related aerospace vehicle items, and flight system articles and safety equipment compatible with the testing equipment provided within the LGTF. The contractor shall conduct all such test programs in accordance with technical specifications provided by the facility customer and incorporated in the Task Order Description; such as Military Specifications, Technical Standard Orders (TSOs), Aerospace Specifications (AS), American National Standards Institute (ANSI) Specifications, airframe manufacturer procurement specifications and critical item development specifications, and customer test plans and specifications. The contractor shall be solely responsible for the detailed planning, execution, and documentation of all aspects of the tasked test efforts. (CDRL Data Item #A012, A013)

5.2.2.1 Test Engineering. The contractor shall provide engineering expertise to review test requirements, plan test activities, establish test procedures and techniques, and to design, manufacture and check-out specialized test equipment, fixtures and jigs in support of tasked test efforts. (CDRL Data Item # A012, A013)

5.2.2.2 Test Preparation. The contractor shall prepare test articles and test machinery for test, including: mounting tires on wheels; installing brakes in wheels; servicing and maintaining aircraft struts and related aerospace hydraulic and pneumatic equipment; mounting test fixtures and specialized test equipment in test carriages; mounting test assemblies in test carriages; moving, installing and removing inertia plates and bolts on variable inertia brake test dynamometers; and operation of material handling equipment, working platforms, scaffolds and hoists to move and position articles for tests. The contractor shall also provide for disassembly, cleaning and restoration of test articles, test equipment and test areas.

5.2.2.3 Test Instrumentation. The contractor shall select and install instruments and sensors on test articles and test machinery, such as pressure transducers, displacement transducers, velocity transducers, accelerometers, strain gages, stress coat and photostress techniques, tire footprint pressure and slip sensors, load cells, torque measurement systems, thermocouples, thermistors, limit and proximity switches, as well as specialized sensors. The contractor shall specify, acquire, install and calibrate sensors and data conditioning equipment as required to support the tasked test efforts.

5.2.2.4 Test Process Control and Data Acquisition. The contractor shall interface test machinery and test article instrumentation with control consoles and associated computing equipment. The contractor shall design and implement hardware and software solutions to the particular real-time process control and data acquisition requirements derived from the facility customer's technical specifications.

5.2.2.5 Test Operation. The contractor shall safely operate all LGTF test machines and equipment, following prescribed procedures, in conducting facility test programs. The contractor shall provide and verify: test setups; machine operational program adjustments; proper operation of instruments and sensors; proper machine load and speed adjustments; and proper operation of the test equipment in a manner to perform the prescribed test. The contractor shall record all appropriate test data. (CDRL Data Item # A022)

5.2.2.6 Test Data Reduction and Analysis. The contractor shall reduce and analyze test data as prescribed by the facility customer and the Task Order Description. The contractor shall prepare test data in formats suitable for presentation, such as tables, charts, time-history plots, parameter cross plots and carpet plots. The contractor shall apply engineering analysis techniques and theories to interpret and apply test results, as prescribed by the Task Order Description. (CDRL Data Item # A017)

5.2.2.7 Test Results. The contractor shall document the results of each test program conducted. (CDRL Data Item # A016, A018)

5.2.3 **Engineering Studies.** The contractor shall perform engineering design studies and analyses of: (1) aircraft landing gear system and component performance phenomena, such as braking system instabilities, nose landing gear shimmy, gear walk, strut dynamics, and landing gear structural dynamics, including modal analysis; (2) landing gear component stress and strain distributions, and fatigue life predictions; (3) test machinery performance and control problems, and requirements to increase the capabilities and performance of existing test machinery; (4) future test machine design, performance and control requirements. The contractor shall conduct all such engineering design studies and analyses in accordance with technical specifications provided by the facility customer and stated in the Task Order Description. (CDRL Data Item # A023)

5.2.4 **Special Projects.** The contractor shall plan and conduct special projects such as: (1) architectural and engineering studies to define facility requirements and develop specifications for facility improvements; (2) minor construction projects within Building 31 and Building 32 South Bay to improve operations or more efficiently use available space; (3) special studies to analyze operational procedures and costs, and to develop recommendations for improvements to facility practices. (CDRL Data Item # A023)

5.2.5 **Facility Upgrading.** The contractor shall upgrade LGTF test machines and equipment to achieve required improvements in performance and testing capabilities in accordance with technical specifications provided by the facility customer and stated in the Task Order Description. (CDRL Data Item # A013, A014)

5.2.6 **Task Order Management.** The contractor shall exercise administrative and financial management functions during the course of ordered task efforts, such as: scheduling of activities and milestones; describing task status; outlining contractor activity and progress toward accomplishment of objectives; planning, forecasting and making recommendations on funding requirements and funding changes; program planning; describing in detail the overall results of each task effort; and documenting any new technological developments. (CDRL Data Item # A001, A002, A003, A004, A009, A024)

5.2.6.1 Task Estimate. The contractor shall plan the technical approach for each task ordered, and estimate the labor (type and quantity) to be utilized, materials and subcontracting (type and quantity) required and the earned carriage hours of test programs, shall propose the schedule (phasing, milestones and completion) and estimate the cost to complete the task requested. The QAE will assign a relative priority rating to each effort at the time the task is ordered. Where scheduling conflicts exist over use of personnel and facility resources, the contractor shall in all cases give precedence to the more highly prioritized task. In estimating material and subcontracting requirements, the contractor shall: (1) Specify quantities in bulk sizes and dimensions for ordering purposes, where practicable. Excesses shall not exceed 20%, unless justifiable, and minimums shall be indicated. (2) Specify alternate or equal types of materials. All required source justifications shall be provided by the contractor. (3) Identify and justify all subcontracting anticipated for each task order.

5.2.6.2 Work Order Receipt. The contractor shall acknowledge receipt of all WOs issued by the QAE within 24 hours of the date reflected on the WO issue. This acknowledgement shall be made to the QAE verbally or by personal hand receipt. The contractor shall be solely responsible for assuring receipt of the authenticated WO documentation upon notification of issuance.

5.2.6.3 Documentation. The contractor shall document all Task Order activities performed during the period of contract performance. The contractor shall summarize and present all tasked activities, discussing current and accumulative expenditures, technical status/progress, problems, deficiencies, revisions, and technical information required for review by the QAE and the facility customer. The contractor shall notify the QAE, in writing, when the accumulative expenditures plus commitments under any Task Order exceeds 75% of the Task Estimate amount.

5.2.6.4 System Safety. For each Task Order and subsequent WO issued for testing or facility upgrading services, the contractor shall develop a systems safety program, including hazard analysis, in accordance with MIL-STD-882C, *System Safety Program Requirements*. The primary objective of the safety program is to formalize an approach to eliminate potential testing hazards through engineering, design, education, management policy and supervisory control for the optimum degree of safety; within the constraints of operational effectiveness, time and cost; throughout all phases of the work and life cycle of any resultant end item. The contractor shall document these considerations, and shall implement these programs during the performance phase of the work. (CDRL Data Item # A007)

5.2.6.5 Cost and Value Engineering. For all efforts planned and performed under this contract, the contractor shall give as much consideration to minimization of cost as is given to attainment of performance characteristics and requirements. In some cases, the value of these trade-offs may require judgements and decisions by the government or the facility customer. The contractor shall identify all such cases and shall make recommendations for Air Force determination of the subsequent courses of action to be followed. These recommendations and results shall be documented by the contractor.

5.2.6.6 Photographic/Video Coverage and Visual Aids. The contractor shall graphically depict items and test articles as built and/or as tested and shall develop visual aids under this effort. The contractor shall provide full photographic and/or videotape coverage of test activities and other items of interest within the LGTF as required by Task Order specifications. (CDRL Data Item # A016, A020, A021)

5.2.6.7 Technical Information. All technical information developed under this effort shall be the property of the Government and the contractor shall provide adequate protection and limited distribution of the information, in accordance with distribution limitation statements provided by the QAE. Exclusive use and licensing rights to all technical information developed under this effort shall be retained by the Government subject to applicable statutes and laws governing release and use of the information.

5.2.6.8 Organizational Conflict of Interest. If, in the performance of work under this contract, the contractor has access to proprietary data of other companies, the contractor must agree with each company to protect such data from unauthorized use or disclosure so long as it remains proprietary and shall furnish a copy of such company-to-company agreement to the Contracting Officer. The contractor shall not be permitted to utilize the data in supplying the system, or components thereof, procured either by formal advertising or negotiation, as a direct result of that study or advice. In addition, the contractor shall not be permitted to utilize the proprietary data in performing, for the Department of Defense, any competitively obtained contract for any additional study or studies in the same or a closely related field.

The contractor must thoroughly inculcate in its employees, through formal training in company policies and procedures, an awareness of the philosophy of FAR Subpart 9.5 to the end that they will be disciplined in the absolute necessity of refraining from divulging proprietary data, trade secrets, confidential information or restricted data from other companies received in connection with work under this contract to any unauthorized person.

The contractor must obtain from any employee having access to proprietary data under this contract an agreement, in writing, which shall in substance provide that such employee will not, during his employment with the contractor or thereafter, disclose to others or use for his own behalf, trade secrets, confidential information, or restricted data received in connection with the work under this contract.

5.2.6.9 Computer Software. All computer software developed or modified by the contractor under this effort shall be documented. The current versions of ANSI standard higher order programming languages shall be used unless otherwise specified or justified by the contractor for special applications. Computer software shall be delivered on media compatible with the GFE computer systems on which it is intended to operate, and shall be due not later than 30 calendar days after the completion of each contract performance period.

5.2.6.10 Communications with Facility Customers. The contractor shall designate an individual to act as the primary point-of-contact (POC) between the contractor, the QAE and the facility customer for each Task Order issued. The contractor's point-of-contact shall be responsible for keeping the facility customer apprised of Task Order status, progress, results, and scheduled activities via telephone conferences, e-mail, facsimile transmissions, transmissions of data across the internet, memorandums, and personal contact. In instances where an off-base facility customer expresses an urgent requirement for receipt of test results or other technical data developed under this effort, the contractor will be authorized to transmit the required data to the facility customer via the most economical express mail or overnight package delivery service.

5.2.6.11 Test Article and Task Order Residue Disposition. The contractor shall disposition all excess materials, test articles, test support equipment and other Task Order residue as specified by the Task Order Description and/or as directed by the QAE.

5.2.6.12 Off-Site Work Planning. The contractor shall document any work effort proposed for performance at an off-site location (i.e., outside of the LGTF). All such off-site work requests shall be subject to the prior review of the Air Force. The contractor shall not begin performance of off-site work prior to receipt of Contracting Officer notification to proceed. (CDRL Data Item # A008)

5.2.6.13 Documentation of Task Order Costs. The contractor shall document all costs associated with the accomplishment of each Task Order. The contractor shall provide a summary of these costs to the facility customer as specified by the Task Order Description. (CDRL Data Item #A024)

5.3 MOBILITY DEPLOYMENT, DISASTER PREPAREDNESS, EXERCISES, AND OTHER CONTINGENCIES. On occasion, the contractor's services may be required to support an activation or exercise of contingency plans. The CO will notify the contractor if this should occur. Special or emergency situations (i.e., weather-related situations, base closures, reduced activity around the Christmas Holiday) may necessitate the contractor operating on a reduced basis. The CO will notify the contractor of any reduced hours. If the activation or exercise requires either effort outside normal duty hours or workload outside the parameters of any variation in workload provisions of this contract, such increase in contractor effort shall be subject to upward equitable adjustment. Likewise, should any activation, exercise or reduced hours result in decreased contractor effort, a downward equitable adjustment shall be negotiated.

5.3.1. **Accrued Expenditures Notification.** The contractor shall notify the Contracting Officer in writing whenever there is reason to believe that the hourly rate payments and material expenditures that will accrue in performing this contract in the next succeeding 60 days, when added to all other hourly rate payments and material expenditures previously accrued, will exceed 85 percent of the total amount so far obligated to the contract. The notice shall state the estimated amount of additional funds required to continue performance for the period specified in the schedule. For procedures on notification when exceeding 85% of the ceiling price of the contract, see Clause I-389, FAR 52.232-7, Payment under Time-and-Materials and Labor-Hour Contracts.

5.4 PERFORMANCE OF SERVICES DURING CRISES DECLARED BY THE NATIONAL COMMAND AUTHORITY OR OVERSEAS COMBATANT COMMANDER. The contractor shall continue to perform all of the requirements of this contract during a crisis declared by the National Command Authority. The contractor shall continue to perform the contract with the highest possible priority given to the accomplishment of all tasks and activities which support United States Military Forces deployed to the theater of operations.

5.5 SURGE REQUIREMENT CAPABILITIES. Upon notification by the CO, the contractor shall provide continuous uninterrupted operational services to support national commitments up to and including a declared war that would generate surge requirements. These services shall be provided 24 hours a day, 7 days a week, as required for the duration of the emergency. Surge requirements beyond the capability of the contractor may be augmented by the government, at its option, when it perceives that mission accomplishment is endangered. The CO will verbally advise the contractor of the required level of effort and follow-up immediately with a written change to the contract. A supplemental agreement will be negotiated to compensate for additional services required by this paragraph.

SECTION C-6

APPLICABLE PUBLICATIONS AND FORMS

6.0 GENERAL PROVISIONS. Documents applicable to this PWS are listed below. The documents have been coded as advisory (A) or mandatory (M). The contractor is obligated to follow those documents coded as mandatory and shall be guided by those coded advisory to the extent necessary to accomplish the requirements of the PWS. The listed publications and an initial supply of the listed forms, or an internet address where the forms can be located and downloaded, shall be furnished at the start of the first operational performance period. It is the responsibility of the contractor to establish any follow-on requirements with the Publication Distribution Office. Supplements or amendments to these mandatory publications may be issued during the life of the contract and it is the contractor's responsibility to ensure that all mandatory publications are posted and up to date. Compliance shall be according to the following:

6.1 CONTRACTOR RESPONSIBILITY. All tasks set forth in the PWS are the responsibility of the contractor except where wording of the PWS explicitly makes the performance a government responsibility. It is recognized that in conjunction with many tasks set forth therein reference is made to Department of Defense, Air Force, Air Force Materiel Command, and other directives, regulations, manuals, pamphlets, technical orders, instructions, and other guidance. It is also recognized that because such referenced documents have been written with a view toward performance by government personnel they may contain language which indicates performance is to be by government personnel. Whenever such directives, regulations, manuals, pamphlets, technical orders, instructions, and other guidance are referenced, the contractor is to use such references as direction (coded mandatory) or guidance (coded advisory) as appropriate in the performance of the required duties set forth herein and in other sections of the PWS as if such references had been written toward performance by contractor personnel. Except as provided in paragraph 6.3 below, the referenced publications applicable to this contract shall be those bearing the dates set forth in this section of the PWS.

6.2 RESOLUTION OF CONFLICTING GUIDANCE. The contractor shall be bound to perform the PWS by accomplishing the tasks set forth therein and in the cited references required by this section of the PWS provided that:

6.2.1 Should there be a conflict between the PWS and references set forth therein the PWS shall have precedence.

6.2.2 Should there be a conflict between or among two or more such references, those coded as mandatory by the PWS shall have precedence over those coded advisory; between or among those similarly coded, those issued by a higher authority shall have precedence over those issued by a lower authority; and between or among those issued at the same level of authority, those with a later date of issue shall have precedence over those with earlier dates of issue.

6.2.3 Any duty set forth in such reference which shall call for the exercise of non-delegable discretionary governmental authority shall be subject to the final approval of the government official having such authority, notwithstanding that the contractor may be required thereby to perform duties and render advice at a level below such final approval.

6.3 REVISIONS TO PUBLICATIONS. Further, the contractor shall perform according to all such referenced directives, regulations, manuals, pamphlets, technical orders, instructions, and other guidance as they may be from time to time revised, supplemented or amended. Any increase or decrease in cost of performance occasioned by such revisions, supplements or amendments shall form the basis for an equitable adjustment, subject to negotiation according to the provisions of this contract. The contractor shall immediately implement those revisions, supplements or amendments which will result in no change in contract price. However, prior to implementing any such revision, supplement or amendment that will result in a change in contract price, the contractor shall submit to the CO a not-to-exceed (NTE) price proposal or a not less than (NLT) credit proposal therefor and obtain the prior approval of the CO. Said proposals shall be submitted within 30 calendar days from the date the contractor receives notice of the revision, supplement or amendment giving rise to the change in cost of performance.

6.4 TIME LIMIT FOR NEGOTIATION. It is hereby agreed that failure of the contractor to submit an NTE price proposal within 30 calendar days from the date of receipt of any revision, supplement or amendment to any referenced standard, directive, regulation, manual, pamphlet, technical order, instruction, or other guidance shall entitle the Government to performance according to such revision, supplement or amendment at no increase in contract price.

6.5 PUBLICATIONS AND FORMS LIST.

APPLICABLE PUBLICATIONS

Publication Number	Publication Title	Publication Date	Coded (A/M)
International Standards Organization			
ISO/IEC GUIDE 25:1990	General requirements for the competence of calibration and testing laboratories	1990	M
ISO 9001:1994	Quality systems – Model for quality assurance in design, development, production, installation and servicing	1994	M
ISO 9000-2:1997	Quality management and quality assurance standards – Part 2: Generic guidelines for the application of ISO 9001, ISO 9002 and ISO 9003	1997	M
ISO 10012-1:1992	Quality assurance requirements for measuring equipment – Part 1: Metrological confirmation system for measuring equipment	1992	M
ISO 10012-2:1997	Quality assurance requirements for measuring equipment – Part 2: Guidelines for control of measurement processes	1997	M
Military Standards			
MIL-STD-882C NOT 1	System Safety Program Requirements	19 Jan 1996	M
Department of Defense Publications			
DODD 1000.3	Safety and Occupational Health Policy for the Department of Defense	Chg 1, 4/17/79	M
DODD 2000.12	DoD Combating Terrorism Program	9/15/96	M
DODD 2035.1	Defense Economic Cooperation with Canada	11/4/80	A
DODD 2040.2	International Transfers of Technology, Goods, Services, and Munitions	7/5/85	M
DODD 3200.11	Major Range and Test Facility Base (MRTFB)	1/26/98	A
DODI 1010.15	Smoke-Free Workplace	3/7/94	M
DODI 3201.3	DoD Research and Development Laboratories	3/31/81	A

DODI 4100.33	Commercial Activities Program Procedures	9/9/85	A
DODI 4161.2	Management, Control and Disposal of Government Property in the Possession of Contractors	9/26/97	M
DODI 6050.5	DoD Hazard Communication Program	10/29/90	M
DODI 6055.1	DoD Occupational Safety and Health Program	10/26/96	M
DODI 6055.5	Industrial Hygiene and Occupational Health	1/10/89	M
DOD 5500.7-R	Joint Ethics Regulation (JER)	Chg 3, 1997	M
Air Force Publications			
AFOSH 48-1	Respiratory Protection Program	Feb 1994	M
AFOSH 48-22	Occupational Exposure to Hazardous Chemicals	Mar 1994	M
AFOSH 48-8	Controlling Exposure to Hazardous Materials	Dec 1996	M
AFOSH 91-2	Vehicle Mounted Elevating and Rotating Work Platforms, Manually-Propelled and Self-Propelled Mobile Work Platforms and Scaffolds (Towers)	Aug 1997	M
AFOSH 91-5	Welding, Cutting, and Brazing	May 1997	M
AFOSH 91-22	Walking Surfaces, Guarding Floor and Wall Openings and Holes, Fixed Industrial Stairs, and Portable or Fixed Ladders	Oct 1997	M
AFOSH 91-25	Confined Spaces	Feb 1998	M
AFOSH 91-31	Personal Protective Equipment	Nov 1996	M
AFOSH 91-46	Materials Handling and Storage Equipment	Feb 1997	M
AFOSH 91-66	General Industrial Operations	Oct 1997	M
AFOSH 91-67	Liquid Nitrogen and Oxygen Safety	Oct 1997	M
AFOSH 91-68	Chemical Safety	Oct 1997	M
AFPD 21-1	Managing Aerospace Equipment Maintenance	Aug 1993	M
AFI 21-101	Maintenance Management of Aircraft	Jul 1997	A
AFI 21-113	Air Force Metrology and Calibration (AFMETCAL) Program	May 1994	M
AFMAN 23-110	Standard Base Supply Customer's Procedures	Oct 1997	A
AFI 24-301	Vehicle Operations	Sep 1997	M

AFI 24-302	Vehicle Maintenance Management	May 1994	M
AFMAN 24-309	Vehicle Operations	Nov 1995	M
AFI 31-209	The Air Force Resource Protection Program And AFMC Supplement 1	Nov 1994	M
AFI 31-210	The Air Force Antiterrorism (AT) Program	Jul 1995	M
AFI 32-7042	Solid and Hazardous Waste Compliance And AFMC Supplement 1	May 1994	M
AFI 32-7045	Environmental Compliance Assessment and Management Program	Apr 1994	M
AFPD 33-2	Information Protection	Dec 1996	M
AFI 33-103	Requirements Development and Processing And AFMC Supplement 1	Jul 1996	M
AFPD 37-1	Air Force Information Management	Nov 1993	M
AFPD 61-3	Domestic Technology Transfer	Jul 1994	A
AFI 61-302	Cooperative Research and Development Agreements And AFMC Supplement 1	Jul 1994	A
AFI 64-106	Air Force Industrial Relations Activities	Mar 1994	M
AFMAN 64-108	Service Contracts	Nov 1994	M
AFI 91-301	Air Force Occupational and Environmental Safety, Fire Prevention and Health (AFOSH) Program And AFMC Supplement 1	Jun 1996	M
AFPAM 91-210	Contract Safety	Feb 1994	M

Air Force Materiel Command Publications

AFMCI 21-108	Organic Depot Maintenance Quality Assurance (QA) And Production Acceptance Certification (PAC)	Feb 1998	A

Tire and Rim Association

N/A	Aircraft Engineering Design Information	Annual Issue	A
N/A	Aircraft Year Book	Annual Issue	A

APPLICABLE FORMS

Form Number	Form Title	Form Date	Coded (A/M)
Air Force Forms			
AF Form 171	Request for Driver's Training and Addition to U.S. Government Drivers License	Jun 1995	M
AF Form 1800	Operator's Inspection Guide and Trouble Report		
AFMC Forms			
AFMC Form 306	Preventive Maintenance Instruction	Mar 1993	M
AFMC Form 496	Application for AFMC ID Card	Nov 1992	M
WPAFB Forms			
WPAFB Form 1711	Request and Authorization for Temporary Duty - Contractor Personnel	Mar 1996	M
Standard Forms			
SF 701	Activity Security Checklist	Aug 1985	M

TECHNICAL EXHIBIT 1

PERFORMANCE REQUIREMENTS SUMMARY (PRS)

Reserved

TECHNICAL EXHIBIT 2

WORKLOAD ESTIMATES

SERVICE	QUANTITY	FREQUENCY
Test Program Support		
1. 120 Inch Dynamometer	5,000 ECH	Evenly throughout year
2. 168I Dynamometer	2,000 ECH	Evenly throughout year
3. 84 Inch Dynamometer	1,000 ECH	Evenly throughout year
4. 192 Inch Dynamometer	500 ECH	Evenly throughout year
5. Drop Towers	100 ECH	Infrequent
6. Large Baldwin	1,000 ECH	Evenly throughout year
7. L-RAY Tire Analyzer	200 ECH	Evenly throughout year
8. MTS Material Tester	100 ECH	Infrequent
9. Fatigue Test Machine	100 ECH	Infrequent
Engineering Studies	5 per year	Evenly throughout year
Special Projects	5 per year	Evenly throughout year
Facility Upgrading	4 per year	Evenly throughout year

TECHNICAL EXHIBIT 3

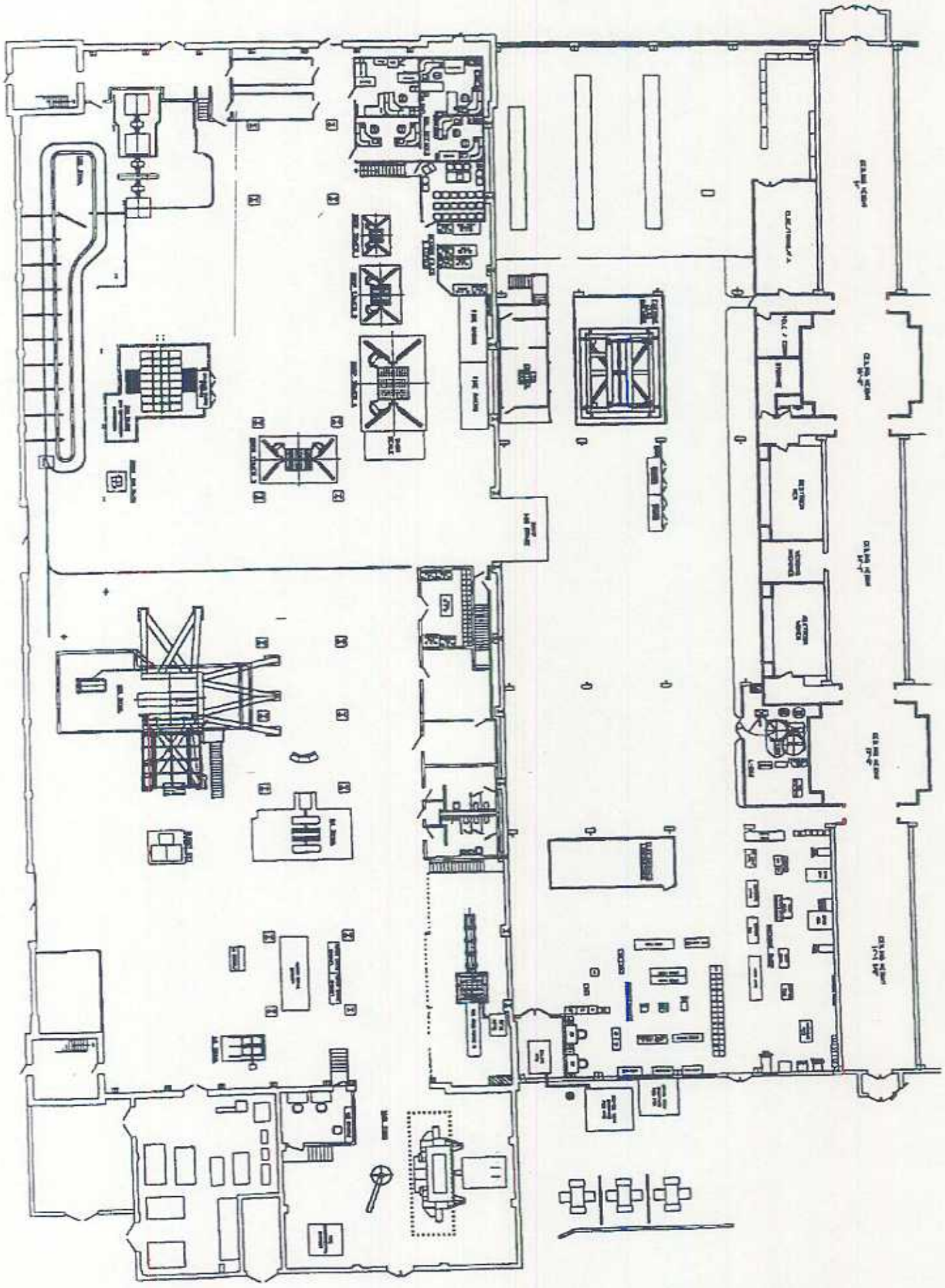
MAPS AND WORK AREA LAYOUTS

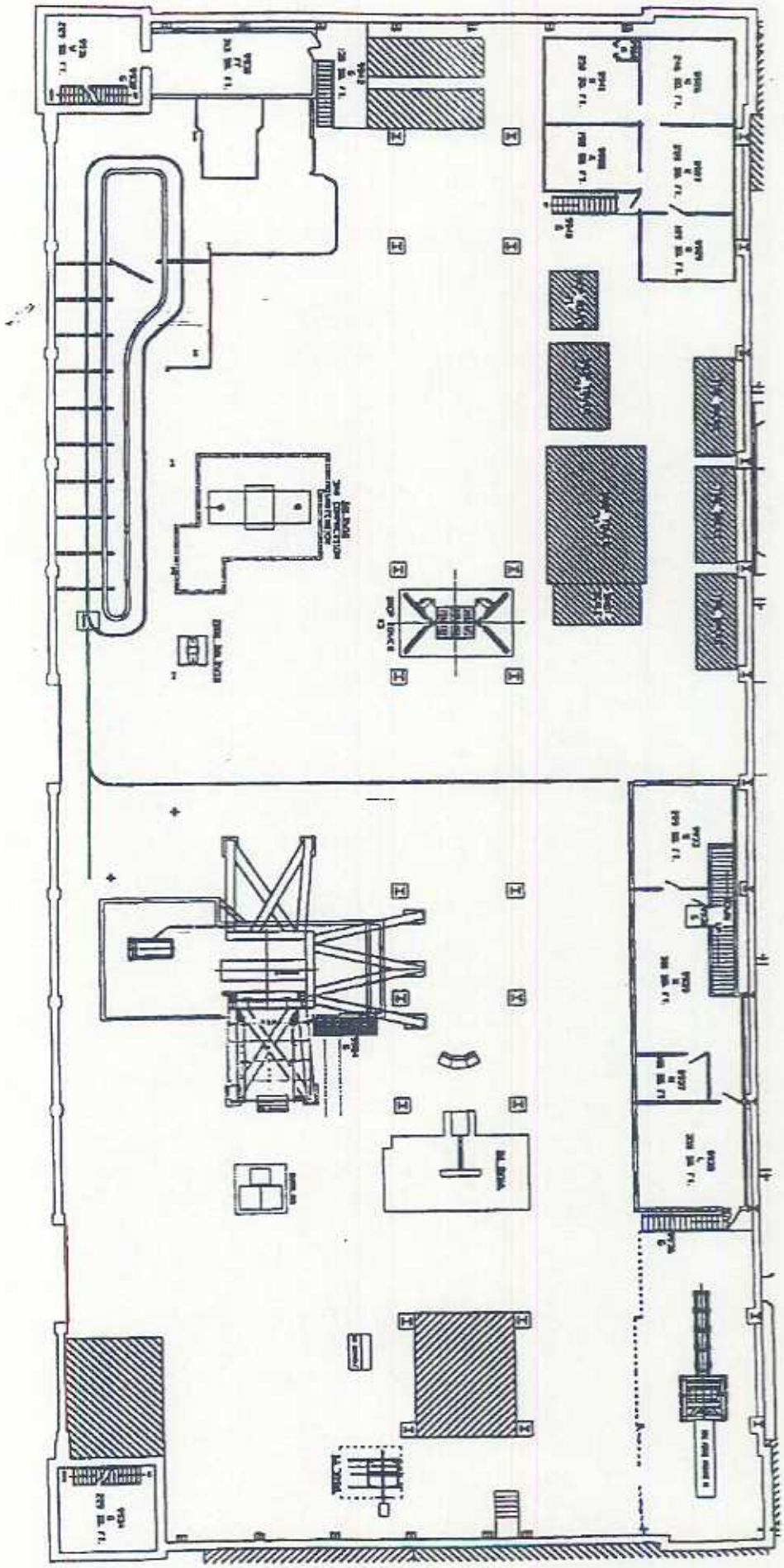
Sheet 1 – Facility 20031 and 20032 South Bay Ground Floor

Sheet 2 – Facility 20031 Second Floor

Sheet 3 – Facility 20031 Third Floor (Government Offices)

F22601-00-DJ010





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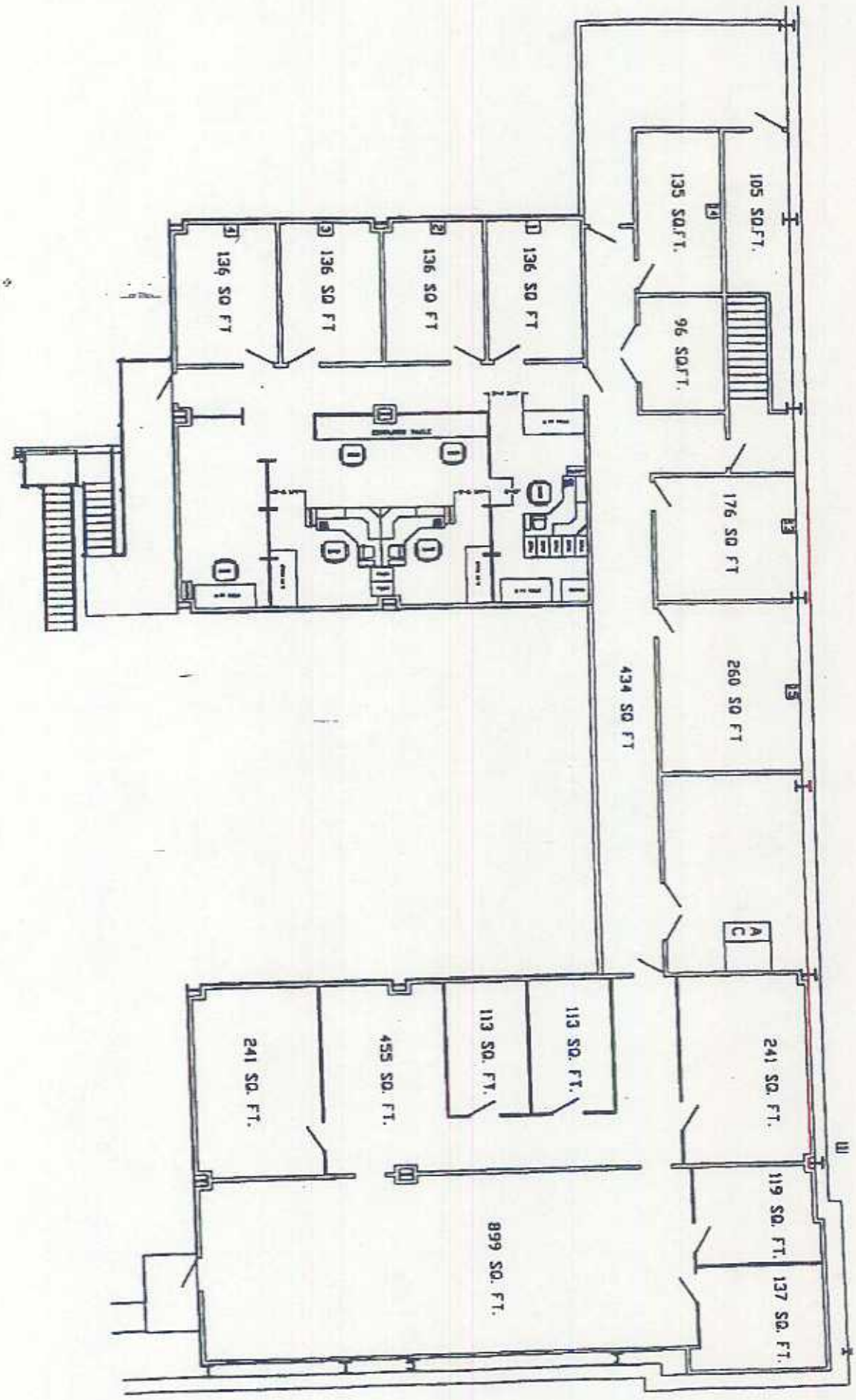

TECHNICAL EXHIBIT 4

CONTRACT DATA REQUIREMENTS LIST

SUMMARY OF DATA REQUIREMENTS

ITEM	DESCRIPTIVE TITLE/SUBTITLE	PWS REF	DID NUMBER
A001	FUNDS AND MAN-HOUR EXPENDITURE REPORT	5.1.1, 5.2.6	DI-FNCL-80331
A002	CONTRACT FUNDS STATUS REPORT (CFSR)	5.1.1, 5.2.6	DI-MGMT-81468
A003	STATUS REPORT	5.1.1, 5.2.6	DI-MGMT-80368
A004	MAN-HOUR ESTIMATE – TECHNICAL COST PROPOSAL S	5.1.1, 5.1.1.5, 5.2.1.2, 5.2.6	DI-FNCL-81116
A005	PROJECT PLANNING CHART	5.1.1	DI-MGMT-80507a
A006	PRODUCT ASSURANCE QUALITY PROGRAM PLAN	5.1.1.1	DI-QCIC-81198
A007	SYSTEM SAFETY HAZARD ANALYSIS REPORT	5.2.6.4	DI-SAFT-80101A
A008	SCIENTIFIC AND TECHNICAL REPORTS – OFF-SITE WORK PLAN	5.2.6.12	DI-MISC-80711
A009	SCIENTIFIC AND TECHNICAL REPORTS – DAILY SHIFT ACTIVITY REPORT	5.2.6	DI-MISC-80711
A010	DATA ACCESSION LIST (DAL)	5.1.1, 5.1.1.9	DI-MGMT-81453
A011	CONCEPTUAL DESIGN DRAWINGS AND ASSOCIATED LISTS	5.1.2.1	DI-DRPR-81001A
A012	DEVELOPMENTAL DESIGN DRAWINGS AND ASSOCIATED LISTS	5.1.2.1, 5.2.2	DI-DRPR-81002A
A013	TEST PROCEDURE	5.1.2.1, 5.2.2, 5.2.5	DI-NDTI-80603
A014	OPERATIONS AND MAINTENANCE INSTRUCTIONS FOR R&D EQUIPMENT	5.1.2.1, 5.2.5	DI-MISC-81414
A015	CALIBRATION AND MEASUREMENT REQUIREMENTS SUMMARY (CMRS)	5.1.3.4	DI-QCIC-80278A
A016	STILL PHOTO COVERAGE	5.2.2.7, 5.2.6.6	DI-MISC-80169
A017	SCIENTIFIC AND TECHNICAL REPORTS – DATA AND/OR ANALYSIS SUMMARY	5.2.2.6	DI-MISC-80711
A018	TEST/INSPECTION REPORTS	5.2.2.7	DI-NDTI-80809B
A019	SCIENTIFIC AND TECHNICAL REPORTS – FINAL TASK REPORT: VOL I THRU VOL __	5.1.1.9	DI-MISC-80711
A020	TECHNICAL VIDEOTAPE	5.2.6.6	DI-MGMT-81275
A021	PRESENTATION MATERIAL	5.1.3.1, 5.1.3.2, 5.1.3.7, 5.2.6.6	DI-ADMN-81373
A022	SCIENTIFIC AND TECHNICAL REPORTS - RAW TEST DATA	5.2.2.5	DI-MISC-80711
A023	SCIENTIFIC AND TECHNICAL REPORTS – SPECIAL TECHNICAL REPORTS	5.1.1.6, 5.2.3, 5.2.4	DI-MISC-80711
A024	SCIENTIFIC AND TECHNICAL REPORTS – SUMMARY COST REPORTS	5.1.1, 5.2.6	DI-MISC-80711
A025	OPERATIONS SECURITY (OPSEC) PLAN	5.1.1.7	DI-MGMT-80934

INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12-M for detailed intructions.)

FOR GOVERNMENT PERSONNEL

Item A. Self-explanatory.

Item B. Self-explanatory.

Item C. Mark (X) appropriate category: TDP - Technical Data Package; TM - Technical Manual; Other - other category of data, such as "Provisioning," "Configuration Management", etc.

Item D. Enter name of system/item being acquired that data will support.

Item E. Self-explanatory (to be filled in after contract award).

Item F. Self-explanatory (to be filled in after contract award).

Item G. Signature of preparer of CDRL.

Item H. Date CDRL was prepared.

Item I. Signature of CDRL approval authority.

Item J. Date CDRL was approved.

Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.

Item 2. Enter title as is appears on data acquisition document cited in Item 4.

Item 3. Enter subtitle of data item for further definition of data item (optional entry).

Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.

Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g., Statement of Work paragraph number)

Item 6. Enter technical office responsible for ensuring adequacy of the data item.

Item 7. Specify requirement for inspection/acceptance of the data item by the Government.

Item 8. Specify requirement for approval of a draft before preparation of the final data item.

Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref. DoDD 5230.24).

Item 10. Specify number of times data items are to be delivered.

Item 11. Specify as-of-date of data item, when applicable.

Item 12. Specify when first submittal is required.

Item 13. Specify when subsequent submittals are required, when applicable.

Item 14. Enter addressees and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.

Item 15. Enter total number of draft/final copies to be delivered.

Item 16. Use for additional/clarifying information for Items 1 through 15. Examples are: Tailoring of documents cited in item 4; Clarification of submittal dates in items 12 and 13; Explanation of reproducible copies in Item 14; Desired medium for delivery of the data item.

FOR THE CONTRACTOR

Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.

a. Group I. Definition - Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing, and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contractor must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply the data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use the data shall be governed by the pertinent provisions of the contract.

CONTRACT DATA RE[illegible]IREMENTS LIST
(1 Data It[illegible]n)

Form Approved F33601-00-DJ010
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO. 0001	B. EXHIBIT A	C. CATEGORY: N/A REF: DOD 5010.12-L AMSDL TDP ____ TM ____ OTHER ____
D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM FUNDS AND MAN-HOUR EXPENDITURE REPORT	3. SUBTITLE
4. AUTHORITY (Data Acquisition Document No.) DI-FNCL-80331/T	5. CONTRACT REFERENCE SEC C, PARA 5.1.1; 5.2.6	6. REQUIRING OFFICE AFRL/VACM

7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED B	10. FREQUENCY MTHLY	12. DATE OF FIRST SUBMISSION **
8. APP CODE N/A		11. AS OF DATE *	13. DATE OF SUBSEQUENT SUBMISSION **

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	
ACO		1	
CO		1	
AFRL/VAF		1	
15. TOTAL		4	

16. REMARKS

Tailored to allow contractor's format.

* At the close of the contractor's monthly accounting period.

** 25 days after Block 11 time.

G. PREPARED BY GREER MCCLAIN AFRL/VACM, (937)255-1609	H. DATE 30JUN98	I. APPROVED BY Leslie J. Steadman 57466 Date [illegible] AFRL/VACM [signature]	J. DATE 30JUN98

DD Form 1423-1, JUN 90 — *Previous editions are obsolete* — Page ____ of ____ Pages

CONTRACT DATA RE( )REMENTS LIST
(1 Data Item)

F33601-00-DJ010

rm Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.: 0001

B. EXHIBIT: A

C. CATEGORY: TDP ____ TM ____ OTHER ____ N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM:

E. CONTRACT/PR NO.:

F. CONTRACTOR:

1. DATA ITEM NO.: A002

2. TITLE OF DATA ITEM: CONTRACT FUNDS STATUS REPORT (CFSR)

3. SUBTITLE:

4. AUTHORITY (Data Acquisition Document No.): DI-MGMT-81468/T

5. CONTRACT REFERENCE: Sec C, Para 5.1.1; 5.2.6

6. REQUIRING OFFICE: AFRL/VACM

7. DD 250 REQ: LT

8. APP CODE: N/A

9. DIST STATEMENT REQUIRED: B

10. FREQUENCY: QRTLY

11. AS OF DATE: *

12. DATE OF FIRST SUBMISSION: **

13. DATE OF SUBSEQUENT SUBMISSION: **

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	
ACO		1	
CO		1	
AFRL/VAF		1	
15. TOTAL		4	

16. REMARKS

Tailored so that the report contains forecasts by month for the next six months, by quarter for the remaining fiscal year, and by year for the remaining fiscal years. CFSR data shall be reconciled to the Government's fiscal year end at 30 September if the contractor's fiscal year end does not coincide with the Government's fiscal year end.

* The last day of the contractor's monthly accounting period nearest the end of the government's fiscal year quarter.

** The initial submission shall be within 25 calendar days after the close of the contractor's monthly accounting period nearest the end of the first government fiscal year quarter after contract award. Subsequent submissions shall be 25 calendar days after Block 11 time.

The contractor shall, whenever possible, transmit all data formats electronically via modem or e-mail.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

G. PREPARED BY: GREER MCCLAIN, AFRL/VACM, (937)255-1609

H. DATE: 30JUN98

I. APPROVED BY: Leslie ... Steadman, 57766, Data Mgr. DEF AFRL/WSPT

J. DATE: 30JUN98

DD Form 1423-1, JUN 90 — *Previous editions are obsolete* — Page ____ of ____ Pages

CONTRACT DATA RE(IREMENTS LIST
(1 Data Item)

F33601-00-DJ010

...m Approved *...d No. 0704-0188*

A. CONTRACT LINE ITEM NO. 0001

B. EXHIBIT A

C. CATEGORY: N/A REF: DOD 5010.12-L AMSDL
TDP ____ TM ____ OTHER ____

D. SYSTEM/ITEM

E. CONTRACT/PR NO.

F. CONTRACTOR

1. DATA ITEM NO. A)03

2. TITLE OF DATA ITEM STATUS REPORT

3. SUBTITLE TASK ORDER STATUS

17. PRICE GROUP

4. AUTHORITY (Data Acquisition Document No.) DI-MGMT-80368/T

5. CONTRACT REFERENCE Sec C, Para 5.1.1; 5.2.6

6. REQUIRING OFFICE AFRL/VACM

18. ESTIMATED TOTAL PRICE

7. DD 250 REQ LT

9. DIST STATEMENT REQUIRED E

10. FREQUENCY MTHLY

12. DATE OF FIRST SUBMISSION *

8. APP CODE N/A

11. AS OF DATE *

13. DATE OF SUBSEQUENT SUBMISSION *

16. REMARKS

Ta lored to allow contractor's format.

* Submit with Data Item # A001.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	
ACO		1	
CO		1	
AFRL/		1	
15. TOTAL		4	

G. PREPARED BY GREER MCCLAIN
AFRL/VACM, (937)255-1609

H. DATE 30JUN98

I. APPROVED BY Leslie J. Steadman 5746
Data Mgr. DET 1, ...

J. DATE 30JUN98

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved OMB No. 0704-0188

F33601-00-DJ0[illegible]

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	N/A REF: DOD 5010.12-L AMSDL
0001	A	TDP ____ TM ____ OTHER ____	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A004	MANHOUR ESTIMATE, TECHNICAL COST PROPOSALS		18. ESTIMATED TOTAL PRICE

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-PNCL-81116/T	Sec C, Para 5.1.1;1 *	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	***
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		**	***

16. REMARKS

Tailored to allow contractor's format.

* 5.1.1.5; 5.2.1.2; 5.2.6

ASREQ means as required to document man-hours and costs for proposed routine tasks.

** At the time a routine task order is received by the contractor.

*** 10 days after Block 11 time.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM	1	1	
ACO		1	
CO		1	
AFRL/VAF		1	
15. TOTAL	1	4	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie Steadman 57456 Data Mgr. DET AFRL/WSPT	30JUN98

DD Form 1423-1, JUN 90 — Previous editions are obsolete — Page ____ of ____ Pages

CONTRACT DATA RE[illegible]IREMENTS LIST
(1 Data [illegible])

[illegible]rm Approved 532601-00-DJ010
[illegible] No. 0704-0188

Public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: N/A REF: DOD 5010.12-L AMSDL
0001	A	TDP ____ TM ____ OTHER ____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A005	PROJECT PLANNING CHART		

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MGMT-80507A/T	Sec C, Para 5.1.1	AFRL/VACM	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	MTHLY	*
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		*	*

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	
ACO		1	
CO		1	
AFRL/VAF		1	
15. TOTAL		4	

16. REMARKS

Tailored to allow contractor's format, and to delete Block 10 paras 10.3.15, 10.3.16 and 10.4.

* Submit with Data Item #A001.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Steadman 57466 Data Mgr: DET [illegible]	30JUN98

DD Form 1423-1, JUN 90 — *Previous editions are obsolete* — Page ___ of ___ Pages

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved F33601-00-DJ010
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO. 0001
B. EXHIBIT A
C. CATEGORY: N/A REF: DOD 5010.12-L AMSDL
TDP ____ TM ____ OTHER ____
D. SYSTEM/ITEM
E. CONTRACT/PR NO.
F. CONTRACTOR

1. DATA ITEM NO. A006
2. TITLE OF DATA ITEM PRODUCT ASSURANCE QUALITY PROGRAM PLAN
3. SUBTITLE
17. PRICE GROUP
18. ESTIMATED TOTAL PRICE
4. AUTHORITY (Data Acquisition Document No.) DI-QCIC-81198/T
5. CONTRACT REFERENCE Sec C, Para 5.1.1.1
6. REQUIRING OFFICE AFRL/VACM
7. DD 250 REQ LT
8. APP CODE A
9. DIST STATEMENT REQUIRED B
10. FREQUENCY ONE/R
11. AS OF DATE 2DAC
12. DATE OF FIRST SUBMISSION 10DAC
13. DATE OF SUBSEQUENT SUBMISSION R/ASR

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM	1	1	1
15. TOTAL	1	1	1

16. REMARKS

Tailored to allow contractor's format.

Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

R/ASR means revisions as required to keep the quality assurance program plan up to date, make changes or corrections; submit revisions as generated. Revisions are subject to the above stated approval/disapproval cycle.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

G. PREPARED BY GREER MCCLAIN AFRL/VACM, (937)255-1609
H. DATE 30JUN98
I. APPROVED BY Leslie J. Steadman 57456 Data Mgr. DET 1, AFRL/WSPT
J. DATE 30JUN98

F33601-00-DJ810

CONTRACT DATA RE JIREMENTS LIST
(1 Data Item)

orm Approved
MB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____	N/A REF: DOD 5010.12-L AMSDL OTHER

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A007	SYSTEM SAFETY HAZARD ANALYSIS REPORT (SSHA)	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-SAFT-80101A/T	Sec C, Para 5.2.6.4	AFRL/VACM

7. DD 250 REQ	8. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	*

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document safety issues for each task order under this effort.

* Submit as generated.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	
15. TOTAL		1	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie Steinman, Data Mgr, DRT 2, AFRL/WSPT	30JUN98

DD Form 1423-1, JUN 90

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CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved F33601-00-DJ01
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	N/A REF: DOD 5010.12-L AMSDL TDP ___ TM ___ OTHER ___

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A008	SCIENTIFIC AND TECHNICAL REPORTS	OFF-SITE WORK PLAN	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MISC-80711/T	Sec C, Para 5.2.6.12	AFRL/VACM	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		*	*

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document any proposed off-site work efforts.

* Submit as generated.

Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

NOTE: Off-site work efforts shall not begin prior to Air Force Program Manager notification to proceed.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM	1	1	
15. TOTAL	1	1	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Lester Goodman Data Mgr DET 1, AFRL/WSPT	30JUN98

CONTRACT DATA RE 'JIREMENTS LIST
(1 Data Item)

F33601-00-DJ01

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER ____	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A009	SCIENTIFIC AND TECHNICAL REPORTS	DAILY SHIFT ACTIVITY REPORT

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80711/T	Sec C, Para 5.2.6	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	DAILY	*
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		*	*

14. DISTRIBUTION			
a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
AFRL/VACM		1	
15. TOTAL		1	

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

16. REMARKS

Tailored to allow contractor's format.

* The contractor shall provide the Air Force Program Personnel ready access to the daily shift activities log and then deliver that log to Air Force Program Manager at the end of the technical effort of this contract.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie Spielman Data Mgr, DET 1, AFRL/WSPT	30JUN98

DD Form 1423-1, JUN 90

Previous editions are obsolete

CONTRACT DATA RE IREMENTS LIST
(1 Data Item)

F33601-00-DJ01

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	N/A REF: DOD 5010.12-L AMSDL
0001	A	TDP ____ TM ____ OTHER ____	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A010	DATA ACCESSION LIST (DAL)		18. ESTIMATED TOTAL PRICE

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-81453/T	Sec C, Para 5.1.1; 5.1.1.9	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	SEMIA	*
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		*	*

16. REMARKS

Tailored to allow contractor's format.

* Submit at the end of each six month period with Data Item #A002.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	
15. TOTAL		1	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie A. Freedman Data Mgr. DET 1, AFRL/WSPT	30JUN98

DD Form 1423-1, JUN 90 *Previous editions are obsolete* Page ____ of ____ Pages

CONTRACT DATA RE IREMENTS LIST
(1 Data Item)

F33601-00-DJ010

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP ____ TM ____ OTHER N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A011	CONCEPTUAL DESIGN DRAWINGS AND ASSOCIATED LISTS		18. ESTIMATED TOTAL PRICE

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-DRPR-81001A/T	Sec C, Para 5.1.2.1	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
H/A	*	* R/ASR

16. REMARKS

Tailored to allow contractor format as defined in the attached DD Form 2554-2.

ASREQ means as required to document conceptual designs through out this effort.

* Submit as generated, or as changes are made.

R/ASR means revisions as required to maintain up to date and accurate drawings and lists. Revisions are subject to the approval cycle as stated.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	1
15. TOTAL		1	1

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J Steadman 57486 Data Mgt. Off.	30JUN98

DD Form 1423-1, JUN 90 — Previous editions are obsolete — Page ____ of ____ Pages

~~F33601-88-DJ010~~

TDP OPTION SELECTION WORKSHEET
CONCEPTUAL DESIGN DRAWINGS AND ASSOCIATED LISTS

A. CONTRACT NO.	B. EXHIBIT/ATTACHMENT NO.	C. CLIN.	D. CDRL DATA ITEM NO.
Solicitation No. F33601-97-R-9019	A	0001	A011

1. DELIVERABLE PRODUCT *(X and complete as applicable)*

	a. ORIGINALS *(Drawing masters) (Identify specification, type, grade and class, etc.)*
X	b. REPRODUCTIONS *(Identify specification, type, grade and class, etc., and quantity of each)*
X	c. DIGITAL DATA *(Identify specification, exchange media, etc.)* AutoCad

2. CAGE CODE AND DOCUMENT NUMBERS *(X one)*

X	a. CONTRACTOR
	b. GOVERNMENT *(Complete (1) and (2) or (3))*

(1) Use CAGE Code	(2) Use Document Numbers	(3) To Be Assigned By:

3. DRAWING FORMATS AND DRAWING FORMS *(X one and complete as applicable)*

X	a. CONTRACTOR FORMATS. Forms to be supplied by contractor.
	b. GOVERNMENT FORMATS. Forms to be supplied by contractor. Samples supplied by *(Specify)*
	c. GOVERNMENT FORMATS. Forms to be supplied as Government Furnished Material by *(Specify)*

4. TYPES AND QUANTITY OF DRAWINGS SELECTION *(X one)*

X	a. CONTRACTOR SELECTS		b. GOVERNMENT SELECTS *(Specify in Item 6)*

5. ASSOCIATED LISTS *(X and complete as applicable)*

X	a. PARTS LISTS *(X one)*		(1) Integral		(2) Separate	X	(3) Contractor's Option
X	b. DATA LISTS *(X one)*	X	(1) Not Required		(2) Required *(Specify levels of assembly)*		
X	c. INDEX LISTS *(X one)*	X	(1) Not Required		(2) Required *(Specify levels of assembly)*		

6. OTHER TAILORING *(Attach additional sheets as necessary)*

CONTRACT DATA RE IREMENTS LIST
(1 Data Item)

F33601-00-DJ00

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP ____ TM ____ OTHER N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A012	DEVELOPMENTAL DESIGN DRAWINGS AND ASSOCIATED LISTS	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-DRPR-81002A/T	Sec C, Para 5.1.2.1; 5.2.2	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	*	* R/ASR

16. REMARKS

Tailored to allow contractor format as defined in the attached DD Form 2554-3.

ASREQ means as required to document developmental designs through out this effort.

* Submit as generated, or as changes are made.

Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

R/ASR means revisions as required to maintain up to date and accurate drawings and lists. Revisions are subject to the approval cycle as stated.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM	1	1	1
15. TOTAL	1	1	1

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Steadman, ST, DAF Data Mgr. DET 1 AFRL/VSPT	30JUN98

F33601-00-DJ010

TDP OPTION SELECTION WORKSHEET
DEVELOPMENTAL DESIGN DRAWINGS AND ASSOCIATED LISTS

A. CONTRACT NO.	B. EXHIBIT/ATTACHMENT NO.	C. CLIN.	D. CDRL DATA ITEM NO.
Solicitation No. F33601-97-R-9019	A	0001	A012

1. DELIVERABLE PRODUCT *(X and complete as applicable)*

	a. ORIGINALS *(Drawing masters) (Identify specification, type, grade and class, etc.)*
X	b. REPRODUCTIONS *(Identify specification, type, grade and class, etc., and quantity of each)*
X	c. DIGITAL DATA *(Identify specification, exchange media, etc.)* AutoCad

2. CAGE CODE AND DOCUMENT NUMBERS *(X one)*

X	a. CONTRACTOR
	b. GOVERNMENT *(Complete (1) and (2) or (3))*

(1) Use CAGE Code	(2) Use Document Numbers	(3) To Be Assigned By:

3. DRAWING FORMATS AND DRAWING FORMS *(X one and complete as applicable)*

X	a. CONTRACTOR FORMATS. Forms to be supplied by contractor.
	b. GOVERNMENT FORMATS. Forms to be supplied by contractor. Samples supplied by *(Specify)*
	c. GOVERNMENT FORMATS. Forms to be supplied as Government Furnished Material by *(Specify)*

4. TYPES AND QUANTITY OF DRAWINGS SELECTION *(X one)*

X	a. CONTRACTOR SELECTS		b. GOVERNMENT SELECTS *(Specify in Item 8)*

5. ASSOCIATED LISTS *(X and complete as applicable)*

X	a. PARTS LISTS *(X one)*	X	(1) Integral		(2) Separate		(3) Contractor's Option
X	b. DATA LISTS *(X one)*	X	(1) Not Required		(2) Required *(Specify levels of assembly)*		
X	c. INDEX LISTS *(X one)*	X	(1) Not Required		(2) Required *(Specify levels of assembly)*		

6. DETAILS *(X one)*

X	a. MULTIDETAIL DRAWINGS PERMITTED		b. MONODETAIL DRAWINGS MANDATORY

7. APPLICABILITY OF DOD-STD-100. The following chapters of DOD-STD-100 apply: *(X as applicable)*

	a. CHAPTER 300, "DRAWING TITLES"		b. CHAPTER 400, "NUMBERING CODING AND IDENTIFICATION"	X	c. CHAPTER 500, "REVISION OF ENGINEERING DRAWINGS"

8. OTHER TAILORING *(Attech additional sheets as necessary)*

F33601-00-DJ010

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	N/A REF: DOD 5010.12-L AMSDL TDP ___ TM ___ OTHER ___

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A013	TEST PROCEDURE		

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-NDTI-80603/T	Sec C, Para 5.1.2.1; *	AFRL/VACM	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		*	** R/ASR

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM	1	1	
15. TOTAL	1	1	

16. REMARKS

Tailored to allow contractor's format.

* 5.2.2; 5.2.5

ASREQ means as required to document plans for tests through out this effort; submit as generated, or as changes become necessary.

Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

R/ASR means revisions as required to keep the test plans up to date, make changes or corrections; submit revisions as generated. Revisions are subject to the above stated approval/disapproval cycle.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie Stedman 57466 Data Mgr. DET 1	30JUN98

DD Form 1423-1, JUN 90 — *Previous editions are obsolete* — Page ___ of ___ Pages

F33601-00-DJ010

CONTRACT DATA RE' 'IREMENTS LIST
(1 Data Item)

rm Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A014	OPERATIONS & MAINTENANCE INSTRUCTIONS FOR R&D EQUIPMENT		18. ESTIMATED TOTAL PRICE

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-81414/T	Sec C, Para 5.1.2.1; 5.2.5	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		*	*

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document operation and maintenance procedures for all test equipment.

* Submit as generated, or updated.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	1
15. TOTAL		1	1

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie Steinman, 57466 Data Mgr, DET 2, AFRL/WSPT	30JUN98

CONTRACT DATA RE JIREMENTS LIST
(1 Data Item)

F33601-00-DJ01D

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER ____	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A015	CALIBRATION AND MEASUREMENTS REQUIREMENTS SUMMARY (CMRS)	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-QCIC-80278A/T	Sec C, Para 5.1.3.4	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	B	ASREQ	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	*

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document the calibration activities on all tasks through out this effort.

* Submit as generated

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
AFRL/VACM		1	
15. TOTAL		1	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Steadman, 57166 Data Mgt. DET 1, AFRL/WSPT	30JUN98

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CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

F33601-00-DJ01

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OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A016	STILL PHOTO COVERAGE	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80169	Sec C, Para 5.2.2.7;5.2.6.6	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	*

16. REMARKS

Tailored to allow contractor's format.

* Submit with Data Item #A001, when generated.

Reproducible shall be the original film negative.

DO NOT SUBMIT CLASSIFIED PHOTOS OR NEGATIVES TO 88CG/SCCV.

Maximum # of photos shall not exceed 5,000.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	1
88CG/SCCV		1	
15. TOTAL		2	1

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie Steadman Data Mgr, DET 4, AFRL/WSPT	30JUN98

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CONTRACT DATA REQUIREMENTS LIST

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F33601-00-DJ01

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER ____	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A017	SCIENTIFIC AND TECHNICAL REPORTS	DATA AND/OR ANALYSIS SUMMARY	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MISC-80711/T	Sec C, Para 5.2.2.6	AFRL/VACM	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	*	*

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document data and analyses through out this effort.

* Submit as generated.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	1
15. TOTAL		1	1

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Strachan 57466 Date: 30JUN98	30JUN98

DD Form 1423-1, JUN 90

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OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER ____	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A018	TEST/INSPECTION REPORTS	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-NDTI-80809B/T	Sec C, Para 5.2.2.7	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		*	**

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document the test activity and results of testing.

* At the conclusion of each test series.

** 20 days after Block 11 time.

Approval/disapproval by letter from the Air Force Program Manager within 10 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
AFRL/VACM	1	1	1
15. TOTAL	1	1	1

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Sheehan 57456 Data Mgr. DET 1 AFRL/VACM	30JUN98

DD Form 1423-1, JUN 90 — Previous editions are obsolete — Page ____ of ____ Pages

F33601-00-DJ010

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO. 0001

B. EXHIBIT A

C. CATEGORY: N/A REF: DOD 5010.12-L AMSDL — TDP ____ TM ____ OTHER ____

D. SYSTEM/ITEM

E. CONTRACT/PR NO.

F. CONTRACTOR

1. DATA ITEM NO. A019

2. TITLE OF DATA ITEM SCIENTIFIC AND TECHNICAL REPORTS

3. SUBTITLE Final Task Report: Vol I thru Vol __

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

4. AUTHORITY (Data Acquisition Document No.) DI-MISC-80711/T

5. CONTRACT REFERENCE Sec C, Para 5.1.1.9

6. REQUIRING OFFICE AFRL/VACM

7. DD 250 REQ LT

8. APP CODE A

9. DIST STATEMENT REQUIRED E

10. FREQUENCY ONE/R

11. AS OF DATE *

12. DATE OF FIRST SUBMISSION **

13. DATE OF SUBSEQUENT SUBMISSION **

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM	2	2	2
15. TOTAL	2	2	2

16. REMARKS

Tailored to require the official AFRL emblem to be placed in the upper right hand corner of the front cover with affected entries adjusted as required (AFRL will supply a copy of the emblem); Block 10, para 10.3 is clarified so that distribution to DTIC will be through Air Force distribution channels.

Each Task Report shall become a volume of this overall report. For the last volume only Block 7 of this form shall become an "XX" and the DD Form 250 shall be required.

Approval/disapproval by letter from the Air Force Program Manager within 60 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

Draft report shall be unbound, in standard size type, double-spaced and single-sided.

Reproducibles shall be 1). a CAMERA READY, unbound, suitable for offset reproduction, and 2). on 3.5" floppy disk (or CD-ROM, or ZIP drive disk) compatible with MS-Office for Windows95, and both shall incorporate all changes made in the corrected draft. All photos shall be glossy finished.

Submit the reproducible(s) with the final corrected version only.

The contractor is reminded that the National Industrial Security Program Operating Manual, DOD 5220.22-M, Chapter 4, Paragraph 4-208 (a), dated January 1995 requires that records be maintained when documents derive classified from multiple sources.

G. PREPARED BY GREER MCCLAIN, AFRL/VACM, (937)255-1609

H. DATE 30JUN98

I. APPROVED BY Leslie J. Steadman 5746, Data Mgr. [illegible]

J. DATE 30JUN98

CONTRACT DATA R[illegible]UIREMENTS LIST
(1 Data [illegible]em)

F33601-00-DJ010

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO. 0001

B. EXHIBIT A

C. CATEGORY: N/A REF: DOD 5010.12-L AMSDL
TDP ____ TM ____ OTHER ____

D. SYSTEM/ITEM

E. CONTRACT/PR NO.

F. CONTRACTOR

1. DATA ITEM NO. A020

2. TITLE OF DATA ITEM TECHNICAL VIDEOTAPE

3. SUBTITLE

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

4. AUTHORITY (Data Acquisition Document No.) DI-MGMT-81275/T

5. CONTRACT REFERENCE Sec C, Para 5.2.6.6

6. REQUIRING OFFICE AFRL/VACM

7. DD 250 REQ LT

9. DIST STATEMENT REQUIRED E

10. FREQUENCY ASREQ

12. DATE OF FIRST SUBMISSION *

8. APP CODE N/A

11. AS OF DATE *

13. DATE OF SUBSEQUENT SUBMISSION *

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	1
88CG/SCCV		1	
15. TOTAL		2	1

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document videotape coverage of test activities throughout this effort.

* Submit as generated with Data Item #A001.

G. PREPARED BY GREER MCCLAIN
AFRL/VACM, (937)255-1609

H. DATE 30JUN98

I. APPROVED BY Leslie J. Steadman 57466
Data Mgr. OET [illegible]

J. DATE 30JUN98

CONTRACT DATA RE[QU]IREMENTS LIST (1 Data Item) | Form Approved OMB No. 0704-0188 | F33601-00-DJ010

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	N/A REF: DOD 5010.12-L AMSDL TDP ____ TM ____ OTHER ____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A021	PRESENTATION MATERIAL		

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-ADMN-81373/T	Sec C, Para 5.1.3.1; *	AFRL/VACM	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		**	**

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	1
15. TOTAL		1	1

16. REMARKS

Tailored to allow contractor's format.

* 5.1.3.2; 5.1.3.7; 5.2.6.6

ASREQ means as required to document topics under discussion at briefings and reviews.

** Submit at each briefing or review as appropriate.

Maximum # of viewgraphs shall not exceed 1,000 for this contract.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Stuckman, 57456 Data Mgr. DET 1 AFRL/WSPT	30JUN98

CONTRACT DATA R UIREMENTS LIST
(1 Data Item)

F33601-98-D3010

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP ____ TM ____ OTHER N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A022	SCIENTIFIC AND TECHNICAL REPORTS	RAW TEST DATA

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80711/T	Sec C, Para 5.2.2.5	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	*
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
N/A		*	*

16. REMARKS

Tailored to allow contractor's format.

ASREQ means as required to document raw test data for all tests under this effort.

* Submit as generated with the Test Report, Data Item #A018.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

14. DISTRIBUTION			
a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
AFRL/VACM		1	1
15. TOTAL		1	1

17. PRICE GROUP	18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Steadman Deputy Mgr. DET 4, AFRL/WSPT	30JUN98

CONTRACT DATA R)UIREMENTS LIST
(1 Data ,em)

F33601-00-DJ010

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER ____	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A025	OPERATIONS SECURITY (OPSEC) PLAN	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-80934/T	Sec C, Para 5.1.1.7	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ONE/R	30DAC
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		10DAC	R/ASR

16. REMARKS

Tailored so that Block 10, para 10.2 reads: "Content. The Operations Security (OPSEC) Plan shall be in accordance with the OPSEC Analyses Process delineated in the Contractor's Operations Security (OPSEC) Handbook", and further tailored so that Block 10, para 10.3.2 reads "Threat. (refer to the information provided in the Contractor's Operations Security (OPSEC) Handbook and by the Military Intelligence Representative, and include only that portion applicable to this contract)."

The Contractor's Operations Security (OPSEC) Handbook is available from ASC/SPI, WPAFB, OH 45433-6503.

R/ASR means revisions as required to document changes or updates to the OPSEC Plan; changes shall be submitted to ASC/SPI.

Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
AFRL/VACM	1	1	1
ASC/SPI	1	1	
15. TOTAL	2	2	1

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Strassman 5746 Data Mgt. Dept.	30JUN98

F33601-00-D-I010

CONTRACT DATA RE JIREMENTS LIST
(1 Data Item)

orm Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER ____	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A024	SCIENTIFIC AND TECHNICAL REPORTS	SUMMARY COST REPORTS

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80711/T	Sec C, Para 5.1.1; 5.2.6	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	MTHLY	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	*

16. REMARKS

Tailored to allow contractor's format.

* Submit with Data Item #A001.

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/VACM		1	
15. TOTAL		1	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie J. Steadman 5746 Date Appd: 30JUN98	30JUN98

F33601-00-D.I010

CONTRACT DATA RE. JIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:	
0001	A	TDP ____ TM ____ OTHER ____	N/A REF: DOD 5010.12-L AMSDL

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A023	SCIENTIFIC AND TECHNICAL REPORTS	SPECIAL TECHNICAL REPORTS

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MISC-80711/T	Sec C, Para 5.1.1.6; *	AFRL/VACM

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	E	ASREQ	**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		**	**

16. REMARKS

Tailored to allow contractor's format.

* 5.2.3; 5.2.4

ASREQ means as required to document all special reports under this effort.

** Submit as generated.

Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

Submit reproducible on 3.5" floppy disk, or CD-ROM compatible with MS-Office for Windows95.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
AFRL/VACM	1	1	1
15. TOTAL	1	1	1

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
GREER MCCLAIN AFRL/VACM, (937)255-1609	30JUN98	Leslie A. Gardiner Data Mgr. PET-1, AFRL/WSPT	30JUN98

TECHNICAL EXHIBIT 5
ITEMS THAT THE CONTRACTOR WILL HAVE ACCESS TO

TECHNICAL EXHIBIT 5 a

FACILITIES

BUILDING 20031
120 INCH 350 MPH DYNAMOMETER
168i TIRE TEST DYNAMOMETER
192 INCH BRAKE TEST DYNAMOMETER
84 INCH BRAKE TEST DYNAMOMETER
66 INCH BRAKE TEST DYNAMOMETER
TIRE FORCE MACHINE
DROP TOWERS (4)
LOAD APPLICATOR: 200K BALDWIN
LOAD APPLICATOR: 3000K BALDWIN
TIRE COUPON TESTER
OFFICE AREAS
SHOP WORK AREAS

BUILDING 20032
L-RAY AIRCRAFT TIRE ANALYZER
FATIGUE TEST MACHINE
MACHINE SHOP AREA
MAINTENANCE AREA
INSTRUMENTATION ROOM
STORAGE AREAS

TECHNICAL EXHIBIT 5 b

EQUIPMENT

NAME/MODEL	SERIAL #	STOCK #	QTY
COMMON TEST SUPPORT EQUIPMENT			
TIRE BALANCER	3583	I055550	1
TIRE BALANCER	4205P	I021298	1
BEAD BREAKER	none	I021300	1
TIRE MOUNT/DISMOUNT MACHINE	none	I040903	1
JIB CRANE (STUMP AREA)	none	none	1
MTS GROUND LOAD SIMULATOR	914.59	K043798	1
HYDRAULIC POWER PACKAGE 140 GPM 3000 PSI	103	none	1
HYDRAULIC POWER PACKAGE 90 GPM 3000 PSI	225227 (hydro tech)	none	1
LIQUID NITROGEN DEWARS	none	none	2
BOTTLED COMPRESSED NITROGEN	none	none	approx. 50

MACHINE SHOP TOOLS AND EQUIPMENT

MILL - BRIDGEPORT	J39915	I041863	1
BAND SAW - DOALL	36421401	I021250	1
DRILL PRESS - EDLUND	SK204D31	I021255	1
HYDRAULIC PRESS - K.R. WILSON	W-1819	I021241	1
BENCH GRINDER, 3/4 HP - SEARS	931000010	none	1
GRINDER/BUFFER - BALDOR	F280	I055556	1
GRINDER, 10"			
- U.S. ELECTRIC TOOL	260197	none	1
CUT-OFF SAW			
- W.F. WELLS & SONS	75865 A-777	none	1
LATHE - HENDEY	868899	I021253	1
LATHE - CINCINNATI	1W2D55-119	I021237	1
LATHE - LeBLOND	868865	I021254	1

MAINTENANCE TOOLS AND EQUIPMENT

CUT-OFF SAW - WILTON	208852	none	1
SHEET METAL BRAKE			
- DREIS & KRUMP	118525	I041721	1
PIPE THREADER - RIDGID	363383	none	1
WELDER - HOBART	5CW8794	none	1
CUTTING TORCH	none	I020983	1
GRINDER - BLACK & DECKER	685859	none	1
DRILL PRESS - SEPF	6-1522	I021261	1
BAND SAW - DELTA	16-5206	I021264	1
SANDER/BRUSH - DELTA	33-4729	I021239	1
BELT SANDER/GRINDER			
- PORTER - CABLE	4331	I021238	1
DUST COLLECTOR (#148 on mat'l list)	F 377	none	1
FLOOR SCRUBBER	3200D878	none	1
DRILL GRINDER (#166 on mat'l list)			
- STERLING - McDONOUGH	D06227	I055555	1
HARDNESS TESTER	none	I021252	1
BATTERY CHARGER	HR37963-1	K043865	1
STACKER - ROL-LIFT	2256	J004572	1
STACKER - ROL-LIFT	none	none	1
MARKLIFT 40RT AERIAL BOOM	1079M0392	(#00430 on mat'l list)	1
CUSHMAN CART - 3 WHEEL (green)	none	I047074	1
CUSHMAN CART - 4 WHEEL (blue)	none	I041887	1

COMPUTER EQUIPMENT

UCR m_pc2 200 Mhz Pentium cpu	95646	205977	1
Samsung cst7687l 17in monitor	h3ndc00031	205978	1
HP 712/60 PA Risc workstation	6507a50128	203441	1
HP a4032a Monitor	jp02023333	203442	1
HP c1521n Tape Drive	3352e79924	203443	1
HP c1521n Tape Drive	3352e76645	203409	1
HP c3541a Deskjet 1600 Printer	usb6c13096		1
Samsung cst7687l 17in monitor	h3m0300793	205980	1
UCR m_pc2 100 Mhz Pentium cpu	95644	205979	1
HP Laserjet 4 printer	ucbc219581	203410	1
Epson Color II printer	2gre264752	206027	1
HP Laserjet 3 printer	315jd5429	203396	1

HP Laserjet 4 printer	usbc227637	203389	1
Toshiba pa1251uxcd Laptop cpu	27446661-3	734	1
IBM Laptop computer	78-hp55397/10	735	1
UCR m_pc2 100 Mhz Pentium cpu	95645	205981	1
Samsung cst76886 17in monitor	h3cf400615	205982	1
UCR m_pc2 100 Mhz Pentium computer	95647	205983	1
Samsung cstc76876 21in monitor	h3nf600241	205984	1
HP Designjet Plotter	3149a05520	203483	1
K-System 486/50 Mhz computer		203478	1
Epson la2550 printer	0ha1060352	203480	1
Zeos 486 computer		470383	1
CTX 14in monitor		470253	1
HP 382 VXI data acq system	3227a01715	203466	1
HP c22148 disk drive	us45004670	203467	1
HP c2001 Lasetjet4 printer	us8c227632	203444	1
HP 382 VXI data acq system(mod)	3227a10988	203406	1
HP c2214b disk drive	us42004580	203408	1
Nanao Flexscan 15in monitor	68079072-usm	203395	1
Zeos 486 computer		470315	1
DEC vt330 Monitor	ta02301756	205956	1
Unisys vga200 color 15in monitor	137728	203517	1
UCR sys 486 computer	92638	203506	1
Magnitronic gvs1500-ps 15in monitor	6131018	206003	1
Keydata 10KPC1P5100P3 100 Mhz Pen	5001418027	206002	1
GTSI SM 1 486/33 computer	23-C7610	203335	1
Sony Trinitron Monitor		206026	1
Comack Monitor		206025	1
CPU		206024	1
HP 98754a 21in monitor		203444	1
Sun dat tape drive		203402	1
HP modal analysis unit		203438	1
HP 9145 32 track tape drive		203437	1
HP apollo computer		203445	1
GTSI SM 1 486/33 computer	23-D0095	203351	1
CTX CVP-54681NI 14in monitor	NCE14101015	203371	1
HP a4575a 21in monitor	jp24905844		1
HP c4310r cd rom	12568205958		1
HP e8410a 743 data acq system	us38000a0b		1
HP 64515c HP 64000	2444a07252	03465	1
GTSI SM 1 486/33 computer	23-D0167	203366	1
Unisys VGA200-COL 14in monitor	00032228A	203473	1
COMPAC 386 computer	4133HAN21355	03460	1
NEC JC1404HMA 14in monitor	13D02855	203461	1
Daytronic sys 10 Daytronic system		203452	1
HP Laserjet 6p printer		738	1
HP aa033a 23in monitor			1
HP 700i PA Risc workstation			1
Magitronic GSV1500-PS 15in monitor	6131023	205993	1
Keydata 10KPC1P5100P3 100 Mhz cpu	01418039	205992	1
GTSI SM 1 486/33 computer	23-C7751	203354	1
UNISYS VDC2-QSA 14in monitor	0011223A	260190	1
Allied 3012t multiport repeater		203935	1
Motorola 100 Mhz Power PC			1
Motorola 100 Mhz Power PC			1
GTSI SM 1 486/33 computer	23-D0435	203331	1

CTX CMS 1461 14in monitor	A7034032125	203352	1
GTSI SM 1 486/33 computer	23-D2585	203325	1
CANON K10143 BJC-210	EM52302		1
UNISYS VDC2-QSA 14in monitor	00009567A	203451	1
UNISYS VDC2-QSA 486/33 computer	00009567A	203376	1
CANON K10143 BJC-210	EM5280	206022	1
GTSI SM 1 486/33 computer	23-C7851	203339	1
EISA FUTURA 2000486DX-50 486 cpu	11370	203475	1
CTX CMS-1461 14in monitor	A7034032133	203336	1
UNISYS VDC1-VGA 14in monitor	00028575A	203358	1
GTSI SM 1 486/33 computer	23-D2717	203348	1
Goldstar 1410 plur 14in monitor	mc00107645	206019	1
DAYTRONIC SYS10 DATAPAC		206020	1
UNISYS VDC-1 VGA 14in monitor	00028571A	203447	1
GOLDSTAR 1410GCA 14in monitor	MC90802251	203486	1
DAYTRONIC 10K6 SYS10 DATAPAC	LGTF 00628	203485	1
GTSI SM 1 486/33 computer	23-D0063	203342	1
Magitronic 15in monitor		206001	1
? 84 control console PC			1
? Laptop computer			1
Keydata 10KPC1P5100P3 Pentium cpu	5001418058	206000	1
Keydata 10KPC1P5100P3 Pentium cpu	5001418052	206012	1
Keydata 7001409588 Pentium cpu		206988	1
Magitronic GSV1500-PS 15in monitor	6131021	206011	1
Magitronic GSV1500-PS 15in monitor	6131007	205991	1
Magitronic GSV1500-PS 15in monitor	6131008	205999	1
Magitronic GSV1500-PS 15in monitor	6131011	205989	1
Magitronic GSV1500-PS 15in monitor	6131010	206009	1
Unisys VGA 200-COL 14in monitor	00024510A	203418	1
HP ERGO VGA 15in monitor	kr30624587	203407	1
CTX CMS-1461 14in monitor	A7034032110	203329	1
Magitronic GSV1500-PS	6131022	205995	1
Magitronic GSV1500-PS	6131017	205997	1
Sony 100es 15in monitor			1
Sony 100es 15in monitor	4105094		1
Sun 8 mm tape drive	347u1096		1
NEC 17in monitor	7101461nr		1
NEC 17in monitor	5x80674ka		1
Viewsonic 17in monitor	4133638943		1
NEC Thor 17in monitor	5952432nr		1
NEC Odin 17in monitor	5952524nr		1
NEC 17in monitor	5x80021ka		1
DEC vt330 monitor	ta85319647		1

TECHNICAL EXHIBIT 5 c

MATERIAL

ITEM	DESCRIPTION	QTY
00001	Drafting Machine S/N 076-2120	1
00002	Automatic Color Pack Polaroid Camera Model 340	1
00003	Ridgeway East Inc. #6840 Time Base	1
00003A	Ridgeway East Inc. #6452 Omnigraphic 2-Pen XYY'Recorder	1
00004	Comtel-Sterling Precision Calibrator Model 625	1

00005	Bell & Howell 8-114-1 Bridge Signal Conditioner	1
00006	Bell & Howell 8-114-1 Bridge Signal Conditioner	1
00007	Vishay Instruments Power Sup-2110 Strain Gage Mod-2120 Rack Adp-2150	1
00008	Head Degauser GC 30-112-2	1
00009	Swivel Vaccu Vise Model 1850	1
00010	#1850 Swivel Vacu Vise	1
00011	Sabtronics International Model 2000 DMM Kit Digital Meter	1
00012	Pioneer/Dayton OHM Meter 630-A	1
00013	Wavetek Assoc c/o WKM Function Generator Model 182 2MHZ	1
00014	Sabtronics International Model 2000 DMM Kit Digital Meter	1
00015	"Super Huskey" IV-3D Tri-pod (Quick set)	1
00016	Deforest Electronics MM200 3-1/2 Digit Digital Multimeter	1
00017	Heath Kit IT-1121 Semi-Conductor Curve Tracer	1
00018	Fisher Scientific Co. Thermolye HP-A19158 Hot Plate	1
00019	TR-139 Sencor T/R Tester	1
00020	Fluke l900A Counter S/N 0660035	1
00021	Fluke 8000A-MTR-Ol	1
00022	Preston Scientific DX Series MOD Al Instru Amplifier	1
00023	Preston Scientific DX Series MOD Al Instru Amplifier	1
00024	Sharp SP5806 Calculator S/N 93018334	1
00025	Commodore CM50 Calculator S/N 85517	1
00026	XY Plotter Model 800A S/N 193-9/5	1
00027	Kiethley Instruments Digital Multimeter Model 160	1
00028	Keithley 130 Digital Multimeter, 2 METERS WITH 1 MISSING	1
00029	Electro Sales Co. Accelerometer Set 4334S	1
00030	INH Component Sales LF-36 Linear Motion Pos. Transducer	1
00031	Tektronix Oscilloscope 455/A2/B2	1
00032	Validyne Engineering CD101-3-T Carrier Demodulated Printed Circuit Cards	1
00033	John Fluke Mfg. Co. #2240 Data Logger	1
00034	Doric Digitran Model 220-40-J2202F-K 2202F-02-42-26	1
00035	Scientific Devices l-SD-20 Desktop Analog Computer	1
00036	Gould 8 Channel #7418A Brush Recorder	1
00037	Cramer Digital Multimeter Auto Ranging-Weston Model 4444	1
00038	Simpson Voltmeter Model #260	1
00039	Ohio Counting Scale Mod IN 2 Spring Scale	1
00040	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4121	1
00041	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5019	1
00042	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4127	1
00043	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5011	1
00044	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 8070	1
00045	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5021	1
00046	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5024	1
00047	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5012	1
00048	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4128	1
00049	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5018	1
00050	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5013	1
00051	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4103	1
00052	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4129	1
00053	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5010	1
00054	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5007	1
00055	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4124	1
00056	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5002	1
00057	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5025	1
00058	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5022	1
00059	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5023	1

00060	A. Bruce Crock Tab A820 Data Media Reel Truck	1
00061	Ohio Counting Scale Mod IN 10 Spring Scale	1
00062	Datametrics Time Code Gen & Reader	1
00063	Datametrics Search & Control Unit	1
00064	Gould Inc. 4 Channel Recorder T2007-4404-00	1
00065	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5016	1
00066	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4126	1
00067	Kennedy Tape Driver S/N 802-3267	1
00068	Kennedy 9000 Tape Driver S/N 802-3268-PART OF 00067 COST	1
00069	Digital Equipment LA-36-CE DEC WRITER II S/N WF99605	1
00070	Pioneer/Dayton Power supply	1
00071	Sears Roebuck & Co. 2-Ton Capacity Power Pulls 9A77878C	1
00072	Thompson's Supply Co. Floor Scrubber Convertamatic & Charger Model: A24B	1
00073	Dills Supply 1000 # Power-Pull "Come Along" Mini Mule MM5014	1
00074	INH Component Sales LF-12 Linear Motion Pos. Transducer	1
00075	K-AC-605 High Vol 5 (PA Sys) Station Talk-A-Phone	1
00076	K-AC-5406 High Vol 5 (PA Sys)Station Talk-A-Phone 73#	1
00077	4K-HP3V High Volume Sub Talk-A-Phone #V WT 45	1
00078	4K-HP3V High Volume Sub Talk-A-Phone #V WT 27	1
00079	Instrumentation Sys. Model 1050 Anemometer S/N 734	1
00080	Instrumentation Sys. Model 1052 Linearizer	1
00081	Columbus Fastners,Inc Roto Hammer Kit #747	1
00083	6' Wood Stepladder	1
00084	Pioneer/Dayton Heat Gun	1
00085	Sears Roebuck & Co. Wet-Dry Vacuum S/N 208900821	1
00086	Gray Lab Timer Model 300	1
00087	Sears Air Compressor	1
00088	RCA B&W TV Camera #TC2012/8 w/F1.5 Lens S/N 006358	1
00089	RCA F1.5 Lens B&W Closed Circuit TV Camera 8.5MM	1
00090	Sensotec SAC-7 Signal Conditioner	1
00091	Pioneer Digital Counter Model 6130	1
00092	Panasonic 19" B&W TV Monitor, Model TR195MB	1
00093	Panasonic 19" B&W TV Monitor, Model TR195MB	1
00094	RCA Camera S/N CC007 (1 ea)	1
00095	RCA Video Recorder S/N 1046HO100 (1 ea)	1
00096	Toledo Scales Portable Beam Scale #4181 S/N lS-604-1F	1
00097	Dayton Industrial Pro. Jib Rig #48-256-1 w/Fork Channels	1
00098	Tektronic Inc. Digital Plotter S/N B061590	1
00099	6 Channel (RS) R/C Control Model IC-31 S/N 72-36442	1
00100	P & H Hoist-5 Ton Cap. 34BJ28F S/N T63838	1
00101	K&E Paragon Plainimeter S/N 25155	1
00102	Bert Daily's Art Sup. Portable Desk Top Light Table 18"x24"	1
00103	Bert Daily's Art Sup. Portable Light Table #42812	1
00104	TI MI-TI 30 Calculator S/N LTA3576	1
00105	MI-SR 52 TI Calculator S/N 055155	1
00106	Royal Printing Calculator Model 114PD S/N 77093096	1
00107	MI-PC100 Thermal Printer S/N 005238	1
00108	Texas Instrument Programmer Calculator S/N 9124649	1
00109	Gebco Plastic Binding System	1
00110	Calculator S/N 2Y803053	1
00111	Xerox Memorywriter S/N C80-135522	1
00112	IBM Correcting Selectric III S/N 6705-11-4559124	1
00113	Paragon Plainimeter S/N 19346	1
00114	Novus 4525 Scientist P.R. Calculator S/N 108119	1
00115	Novus Calculator S/N 107542	1

00116	#26 36" Firm Joint Caliper (L.S. Starrett)		1
00117	Unitek Model 1-048-03 Dual Range Power Welder Sup.		1
00118	MTS System Corp. Landing Gear Shock & Vibration Equip.		1
00119	J.E. Martin Mach. Co. #1 Gem Vise		1
00120	Rockwell Variable Speed Reversing Drill 3/8"		1
00121	Skil Jig Saw M-487 RHK3		1
00122	Sears 6" Vernier Caliper, Competition Chest		1
00123	Brown & Sharp Digital Mike #599-10		1
00124	Marcy Inc. Grooving Atch, Glide-Ride Complete		1
00125	VOM Newark #62F1678 Meter		1
00126	Snap-On-Tools Torque Multiplier GA186		1
00127	Saddle Jack Stands		1
00128	Saddle Jack Stands		1
00129	Air Treads Eddy Current Turntable System AT115-4		1
00130	Maytag Dryer		1
00131	Washer		1
00132	"K-Line" Floor Care Mach 1 HP-120V 60HZ S/N 172724		1
00133	BDK Spotliter Flashlight Model 9360 201278		1
00134	BDK Spotliter Flashlight Model 9360 201278		1
00135	Model 2214-09 Impact wrench 7914 ELECTRIC		1
00136	BDK Spotliter Flashlight Model 9360 201278		1
00137	GE Dehumidifier Model DH14D, S/N JR		1
00138	GE Dehumidifier Model DH14D, S/N JR		1
00139	JGA Spray Gun 2-gal tank w/air & fluid reg.		1
00140	Mettler Top Loading Balance		1
00141	5008 Square D Voltage Tester		1
00142	Monnier Machinery Co. #60 2-Ton Porta Lift Hyd Floor Crane		1
00143	Starret master precision level		1
00144	24" Vernier Caliper w/case #599-575-24		1
00145	Cushman Mod #10-840-08-000 A Standard Indexing Spacer		1
00146	Kiefaber Master Vernier Caliper #123-12		1
00147	Kiefaber Spring Tempered Steel Rule 604RC C6D4R-36		1
00148	Torit Dust Collector Model #54		1
00149	Cleveland Chucking Reamer Set #70		1
00150	Baldor Carbide Grinder S/N F280		1
00151	ARCAIR Model H-3		1
00152	6510 Milwaukee Heavy Duty Electric Hack Saw		1
00153	Kiefaber Acid Pump Ace 77NR 1/3 HP Pulsating Type 100 PSI		1
00154	880728 Cushman Titan		1
00155	Randall Mfg. Co. Tire Inflation Cage		1
00156	Simpson Voltmeter Model #260		1
00157	Cholmondeley Ind Asso Kil-Air Dryer 400 PSI System		1
00158	Rigid Pipe Reamer OO-R		1
00159	Black & Decker Ind Sander 7" Heavy Duty #04049		1
00160	Target 12/22 Elec Quickie Saw		1
00161	Teledyne Sprauge 78578-305 Pump for Nitrogen Service		1
00162	J. G. Nazerenus Model #N.R. Dispenser Cart Banding Machine		1
00163	Rigid 42-A Cutter Pipe adj 1/2"/2" 4 wheel		1
00164	I-Rigid #500-R Utility Vise		1
00165	Electric Heat & Sup. 8-R Rigid Stand		1
00166	Sterling Models "DV" Twist Drill Grinder S/N: D06227		1
00167	Rigid #25 Set Screw & Pipe Extractor Set		1
00168	Black & Decker Impact Hammer #5015 1/2"	1	
00169	Kiefaber 6' Wood Stepladder (other contractor's or Govt.)		1
00170	Kiefaber 8' #140 Mil-Rite Wood Stepladder		1

00171	Kiefaber 8' Wood Stepladder	1
00172	B & K Precision Model #1403 Oscilloscope	1
00173	Newark Electronics 35F139 Type S-50 5"x9"x4" Tank Size 100 Watt	1
00174	Kiefaber Utility Vise Wilton 643-1/2	1
00175	Sharp Calculator EL8142 S/N 87112165	1
00176	Welding Helmet H-100 Jackson	1
00177	32' Fiberglass Ext. Ladder	1
00178	Sears Roebuck & Co. Bench Grinder 3/4 HP Model 397-19350 S/N 931000010	1
00179	Welding Helmet H-2A	1
00180	10' Alum. Stepladder	1
00181	Utility Vise Wilton 643-1/2	1
00182	Simpson 0805 Leather Storage Case	1
00183	Dayton 1/2 Ton Ratchet Puller MODEL 2Z449	1
00184	Wiggins V. Tester 5008	1
00185	Starrett Height Gage w/attach. in case #454-18	1
00186	Skil Heavy Duty Jig Saw	1
00187	5' #140 Mil-Rite Wood Stepladder	1
00188	Utility Vice Wilton 643-1/2	1
00189	10' Mill Rite Wood Stepladder	1
00190	Kroytype 80 Lettering Machine (1282200)	1
00191	Radio Shack 16K Extended Color TRS-80 Computer w/Cord 0025784	1
00192	Radio Shack Color Ink Jet Printer Model CGP-220 S/N 202148	1
00193	1 Tuner Timer S/N 1203H0314 (1 MISSING)	1
00194	1 RCA CCO10 Camera	1
00195	1 RCA PFP Power Supply S/N 1136H0004 (1 MISSING)	1
00196	1 RCA VFP 170 Recorder S/N 1206N0129 (1 MISSING)	1
00197	Panasonic 5" Monitor Receiver	1
00198	Port. Recorder NVH-9400 3/4" S/N 09602996	1
00199	5" Electronic Viewfinder S/N: 3ZZ05929	1
00200	AC Adaptor NV B-50	1
00201	AC Adaptor NV B-51	1
00202	RCAKK-036 Camera Case	1
00203	Endura 8" Foam Case	1
00204	D-35 Transcribing Unit Recorder	1
00204A	Adp. Bulk Eraser	1
00204B	Sony Tape Recorder Model 910 S/N 51918	1
00205	Sears APF Mark Model #58007 SN J-059979 (8) Calculator	1
00206	440 Polaroid (00221)	1
00207	Bewi Spot Zoom w/Case	1
00208	250MM F4.5 Mamiya Sekor Lens for R-B-67 Camera	1
00209	Seconic Meter	1
00210	77 MM UV Filter (1 ea), 50MM 4.5 Lens w/Hood (1 ea)	1
00211	EFP-17 Cart	1
00212	MKII Tripod	1
00213	Bogan Tripod #3031	1
00214	Sears Roebuck & Co. Lenticular Screen 50"x50" Size	1
00215	Dynair Electronics SE 2600A Special Effects Generator	1
00215A	Dynair Electronics SE 2600A Special Effects Generator	1
00216	4x5 Polaroid Film Holder	1
00217	4x5 Crown Graphic Camera	1
00218	The DeVilbiss Co. Paint Spray Booth w/2-HP motor	1
00219	Drafting Table #640367 w/drawer unit 64-0432	1
00220	#100 Polaroid Camera	1
00221	Flash attachment & case for 440 Polaroid	1
00222	Klopf Audio/Video Closed Circuit T.V. System S/N 6-023753 Model: EVM 23	1

00224	SRC Power Supply Model 3564 S/N 15039	1
00225	Capacitonc Meter Model 820	1
00226	Rockwell 3/8" Variable Speed Hand Drill	1
00227	Silicon Diate Camera Setchell Dual 10" Monitor	1
00228	Digital Equip Corp VT 52AA Video Display (PCR for MOD)	1
00229	Digital Equip Corp LA36 DEC Writer II, 2 H960 (PCR for MOD) RK05F	1
00230	Digital Equip Corp LA36 DEC Writer II, 2 H960 (PCR for MOD) RK05J	1
00231	19" Sharp Monitor/Receiver Model XR2094 S/N: 00272	1
00232	MP4 Polaroid System	1
00233	Polaroid Lighting Unit	1
00234	3M Company Telecopier M711AA,EMT 9165 S/N 001325	1
00235	Microfiche Reader/Printer 3M Series S/N 179688	1
00236	Drafting Table S/N 43J3 2 Scales	1
00237	SR59 Thermal Desktop Printer ATA3979	1
00238	TI 59 Calculator Prog. S/N 0902987	1
00239	Vadic 3451 Modem	1
00240	TI 785 T.I. Portable Terminal S/N 0478508112	1
00241	Hewlett-Packard Co. Graphic Plotter RS232C/CCITT V-24	1
00242	Bell & Howell Microfiche Reader & Accessories	1
00243	Treplaning Tool 1 x 1-1/8 x 5-1/2	1
00245	Bridgeport Right Angle Head #3	1
00246	Arbor Support Braket for #3RA Head	1
00247	Charles River Data Collection System LSI-11 Data	1
00247A	Miltronics TM 11 Type Magtape Controller & Drive	1
00247B	Wesper Corp Power Controller 240 V/12 AMP Cabinet 19"X72"	1
00247C	Netcom % Miltronics Parallel Interface NDRV11	1
00248	Esco TI 820 KSR Printer Terminal S/N 04821 30932	1
00249	Retro Graphics RG-512 (1 ea)	1
00249A	LEAR SIEGIER ADM 3A CAT	1
00250	Alnor Instrument Co. 4000-A Pyrocon Meter	1
00251	Digital Equip Corp (PCR for MOD) PDPllT34A	1
00252	Digital Equip Corp CA Cabinet - 1 BAll-KE Ext (PCR for MOD) Mounting Box 1	
00253	Plessey Peripheral Sys DS05/E RM05 Drive Controller & Cables DD11/300	1
00254	Plessey Peripheral Sys Disk Pack CDC Model #9883-91 S/N:T341306	1
00255	Tektronix Inc. Scope Mobile, two plug-in carrier, 9 pos. Tilt lock	1
00256	Desktop Print Calculator ML-TI 5040 S/N 0139139	1
00257	Ken McCallister Drafting Chair (Martin Instrument Co.)	1
00258	H. J. Kirby Co. D-1064 Inspectors Test Gage 3" Dial 0-600 PSI S/N:101	1
00259	Mag drill stand 3/4 chuck cap. 1-1/2 dia. in steel	1
00260	No. 64-0956 Swing Drawer & Tray (K&E)	1
00262	Proto Torque Wrenches 25-250 ft/lbs S/N 151213	1
00263	Proto Torque Wrenches 25-250 ft/lbs S/N 179087	1
00264	MTS Systems Corp. Tape Playback Monitor Mode 434.01 & 434.02	1
00265	Drafting Chair K & E 103 66000	1
00266	Drafting Chair K & E 660000	1
00267	Seal Dry Mount Press #110	1
00268	Dayton Supply & Tool Torque Test GT 50-F	1
00269	Filmholder	1
00270	Mamiya Camera System Body w/120 Holder	1
00270A	Mamiya Lens Shutter (on camera)	1
00270B	Mamiya Power Drive Control Unit	1
00270C	1 DP 150 RCA Portable Carrying Case	1
00271	Extension Tube & 120 Roll Film Holder	1
00272	Midwest Corp. Video Time Inserter 4-A Co.	1
00273	Radio Shack Color Drive "O" S/N 009911	1

00274	Atlantic Microfilm Cp JR-85A Microfilm Reader	1
00275	Teledyne Hastings Rayd Air Meter Model C-ll Range 0-6000 fpm carrying case	1
00276	Klopf Audio/Video Co. TV Graphic Set - Leteron System	1
00276A	Klopf Audio/Video Co. TV Graphic Set - Leteron System	1
00277	Cole Parmer Inst. Co. #8160-20 Heat Spy LCD F~0-600~F Infrared Thermometer	1
00278	Cole Parmer Inst. Co. #8160-20 Heat Spy LCD F~0-600~F Infrared Thermometer	1
00279	Comtel Instruments DC/DC Gaging Tranducers S/N 11	1
00280	Comtel Instruments DC/DC Gaging Tranducers S/N 12	1
00281	Comtel Instruments DC/DC Gaging Tranducers S/N 10	1
00282	Comtel Instruments DC/DC Gaging Tranducers S/N 9	1
00283	Comtel Instruments DC/DC Gaging Tranducers S/N 8	1
00284	Comtel Instruments DC/DC Gaging Tranducers S/N 7	1
00285	Comtel Instruments DC/DC Gaging Tranducers S/N 6	1
00286	Comtel Instruments DC/DC Gaging Tranducers S/N 5	1
00287	Comtel Instruments DC/DC Gaging Tranducers S/N 4	1
00288	Comtel Instruments DC/DC Gaging Tranducers S/N 3	1
00289	Comtel Instruments DC/DC Gaging Tranducers S/N 2	1
00290	Comtel Instruments DC/DC Gaging Tranducers S/N 1	1
00291	Viatran Advanced Tech Pressure Transmitter S/N 104646473	1
00292	Gould Electronics Thermal Recorder Model 6600-00 S/N 8188.187	1
00293	Edmund Scientific Co. Helium Neon Laser Stock #79020	1
00294	Sears Roebuck & Co. Craftsman 40172 Caliper	1
00296	Brown & Sharp 6" Steel Square #540	1
00297	Do All Combination Wrench Set Thorenson	1
00298	Datametrics LC-23 Encoder Model LD-1000-5LD-1 S/N 3121142	1
00299	Honeywell Cabinet	1
00300	LEBOW c/o S. Sterling Torque Sensor Lebow #2126-300K	1
00301	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 5017	1
00302	Hallowell Utility Truck w/shelf	1
00303	Hallowell Utility Truck w/shelf	1
00304	Hallowell Utility Truck w/shelf	1
00305	Center Video Center Editing Controller S/N 09950339	1
00306	Center Video Center U-Matic Editing Recorder S/N 12811550	1
00307	Center Video Center VHS Editing Recorder S/N 09911223	1
00308	Center Video Center U-Matic Editing Recorder S/N 07810315	1
00309	Jensen Tools & Alloys JTK-17 Tool Kit w/Molded Case (Teletype Repair)	1
00310	Std Handling Devices Model EET Mech Lift Table	1
00311	Omega Engineering HH99J Digital Thermometer (Lost on site)	1
00312	Omega Engineering HH99J Digital Thermometer	1
00313	Pioneer/Dayton Digital Volt OHM Multimeter Model RMS3060 31114006	1
00314	Movieola 50 Professional 16MM Film Viewer	1
00315	SOS Photo Cine Optics 1-16 MM Splicer w/straight and diagnal cutters	1
00316	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal Cond 8-115-1	1
00317	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal S/N 3228	1
00318	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal S/N 4082	1
00319	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal S/N 4087	1
00320	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal S/N 4123	1
00321	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal S/N 4092	1
00322	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal S/N 4073	1
00323	Bell & Howell Channel Mtg. Case 1-038 Bridge Signal S/N 4116	1
00324	Marcy Inc. SAF-TEE Siper Balancer	1
00325	Micro Poise Model: 560-SP Heavy Duty Bal. Machine	1
00326	Hand Elec. Grinder S/N 624852 Type 2 Skil Model 146	1
00327	Panasonic Color Video Monitor Model CT-1330V S/N:UG3541339	1
00328	Texas Instruments TI 50 Calculator S/N 1140459 Ref: P0#2152('75)	1

00329	Hon Secretary Station HN-31831L-WD	1
00330	Starrett Micrometer #224	1
00331	Keyser Video F1.2 Zoom Lens	1
00332	Keyser Video F1-1.9 Sosmicar Lens - PART OF 00331 COST	1
00333	Keyser Video F1-1.9 Tamron Lens - PART OF 00331 COST	1
00334	Starrett Depth Gage #445	1
00335	5' Alum. Stepladder	1
00336	TI SR59 S/N 9403946	1
00337	TI Printer PC/lOOA S/N 7041084	1
00338	10' Wood Stepladder	1
00339	2-J Supply Co Turbo Torch-Turbotate	1
00340	Datametrics Encoder LDM-1200-5-LD-I S/N: 4061869	1
00341	Data Translation Multibus Analog Model: 1742SE S/N: 94396	1
00342	#822 Brown & Sharp FRM Joint Caliper	1
00343	#821 Brown & Sharp FRM Joint Caliper	1
00344	#821 Brown & Sharp FR Joint Caliper	1
00345	United-Alpha Chair E4-A-2-RT	1
00346	United-Alpha Chair E4-A-2-RT w/arms	1
00347	Panasonic 13" Color Monitor Model: BT-S1300N	1
00348	Parker Hannifan Kit C-6990078	1
00349	Radio Shack DMP 120 Radio Shack Printer S/N: 4E19747 TRS80	1
00350	Radio Shack Color Disk Drive TRS80 Model 26-3203	1
00351	McMaster Carr Supply Pneumatic Sheet Metal Shears	1
00352	4811 Empire Professional Magnetic Level	1
00353	Ranon Technology 30 Channel Resistance Interface U-8580	1
00354	Precision IndustrialHelicoil Master Thread Repair Kit P/N5528-16	1
00355	3H292 White-Westinghouse Dehumidifier	1
00356	Ranon Technology 30 Channel Resistance Interface U-8580	1
00357	Dayton Blueprint Digital Planimeter S/N: 001557 Planix 6	1
00358	Ranon Technology 30 Channel Resistance Interface U-8580	1
00359	Ranon Technology 30 Channel Resistance Interface U-8580	1
00360	Digitec Corp. 4040H	1
00361	Lowel Trans Lighting Kit	1
00362	Nikon Camera System	1
00362A	Nikon Camera System	1
00363	Eastwood Co. Spot Weld Gun	1
00364	Panasonic 25" Monitor/Receiver S/N: PQ263486	1
00365	Xybion Electronic Sys Xybion Solid State Video Camera w/12.5-75MM	1
00366	Xybion Electronic Sys 5 inch Color Monitor AC/DC S/N: 12950229	1
00367	Xybion Electronic Sys NiCa Battery - Battery Charger (Part of 00366 cost)	1
00368	Xybion Electronic Sys 3/4" U-Matic Tape Recorder S/N: 14910399 w/AC	1
00369	Xybion Elctrnc Sys Adapter/Chrgr S/N: 15812861 Rechg Battery (Part of 00368 cost)	1
00370	Xybion Electronic Sys Video Time Inspection Device	1
00371	Xybion Electronic Sys Tripod w/Fluid Head & Dolly	1
00372	Xybion Electronic Sys Shipping & Storage Case	1
00373	Xybion Electronic Sys Shipping & Storage Case	1
00374	Xybion Electronic Sys Shipping & Storage Case 3/4" U-Matic Tape Recorder	1
00375	Beckley/Cardy Office Chair	1
00377	Crown Controls Corp. Pallet Mover S/N: 3-176599 Model: PTH 27x48	1
00378	RDP Associates String Potentiometer	1
00379	Kanon Dial Caliper - Series 110	1
00380	Crown Controls Corp. Pallet Mover S/N: 3-183850 Model: PTH 27x48	1
00381	Keithley Digital Multimeter Model: 135A S/N: 287603	1
00382	Falco Data Products CRT Terminals w/Keyboard & Graphic Option RS232 S/N:61262	1
00383	Falco Data Products CRT Terminals w/Keyboard & Graphic Option RS232 S/N:61265	1

00384	Falco Data Products CRT Terminals w/Keyboard & Graphic S/N: 61266		1
00385	Falco Data Products CRT Terminals w/Keyboard RS232 S/N: 053145		1
00386	Falco Data Products CRT Terminals w/Keyboard & Graphic S/N: 61263		1
00387	Falco Data Products CRT Terminals w/Keyboard RS232 S/N: 053219		1
00389	Pioneer Dayton Test Controllers S/N: CX81505-RL02-AK Disk Drive		1
00390	Pioneer Dayton Test Controllers S/N: CX76812-RL02-AK Disk Drive		1
00391	Pioneer Dayton Test Controllers S/N: BT03269 PDP 11/73		1
00392	Falco Data Products CRT Terminals w/Keyboard & Graphic S/N: 61264		1
00393	Minolta Maxxum Camera System MN 7000, SN 14035922		1
00394	Nikon 20MM Lens S/N: 750296		1
00395	Lens S/N: 3005304		1
00396	Digi Key Video Monitor S/N 4507126		1
00397	Hewlett Packard Printer S/N: 2235A08821		1
00398	ADACS SYSTEM PDP 11/73 S/N: BTO2942		1
00399	Packaging & Handling (1) G.H. Tensioner		1
00400	Packaging & Handling (2) KDU-114 Manual Sealer		1
00401	Cine Sungun S/N 38839		1
00402	Video Corrector S/N 06495		1
00403	Knox Character Generator S/N 06506		1
00404	Datum Magnetic Tape Controller S/N B076 - PART OF 00067 COST		1
00405	Color Video Camera WV-3900 1" Newvicon Tube SN16A0038		1
00406	Bogen Flash Meter		1
00407	Pelter Boom Mike AMARC S/N:0230213		1
00408	Pelter Boom Mike AMARC S/N:0232235		1
00409	Wireless Throat Mike S/N:0200691	1	
00410	Wireless Throat Mike S/N:0179000	1	
00411	Midwest Communication Colortran 8" Light Model #100-221		1
00412	Midwest Communication Colortran Superstrand w/adapter		1
00413	Midwest Corp. Color Camera TV S/N 4YA07217 Model WV4050		1
00414	Midwest Corp. Color Camera Power Supply S/N 4YA07280 Model WV4052		1
00415	Midwest Corp. Remote Control Unit S/N: 57Z09355 Model WV7330		1
00416	Midwest Corp. Color Monitor S/N: KC5243663 Model CT-1020M		1
00417	Midwest Corp. Tilt/Pan Head S/N: 57Z00287 Model WV7230B		1
00418	Midwest Corp. TV Lens 9-54 MM S/N 5071710006 Model WV-LZ896	1	
00419	Midwest Corp. Camera Housing S/N: None Model WV-7130		1
00420	Midwest Corp. Camera Housing S/N: None Model WV-7130		1
00421	Midwest Corp. TV Lens 9-54MM S/N: 5062810144 Model WV-LZ8016		1
00422	Midwest Corp. TV Camera S/N: 4YA07260 Model WV-4051		1
00423	Midwest Corp. Camera Power Supply S/N 4YA07204 Model WV-4052		1
00424	Midwest Corp. Color Monitor S/N: KC5243638 Model CT-1020M		1
00425	Midwest Corp. Tilt/Pan Head S/N: 57Z00295 Model WV7230B		1
00426	Midwest Corp. Remote Control Unit S/N: 57Z09365 Model WV7330		1
00427	Midwest Corp. Video Switcher S/N: 56Z01129 Model WJ-200RB		1
00428	Micro-Term Co. Ergo with Plot 10 Graphic 1. SN 9259850950101		1
00429	Micro-Term Co. Ergo with Plot 10 Graphic 2. SN 9259850950100		1
00430	Marklift Aerial Boom S/N: 1079M0392 Model 40RT		1
00431	6 Ton "Come Along"		1
00432	Ardan Royal Delux Commercial Calculator S/N: 79622995		1
00434	Floor Scrubber TB 3200		1
00435	Panasonic Camera WV-CDIIO S/N 62A01681		1
00435A	Panasonic Camera WV-CDIIO S/N 62A01681		1
00436	Panasonic Color Monitor WV-CMIIO S/N 62A00490		1
00437	Hewlett Packard Printer Model: 2225A S/N 2621S30425 (GEC)		1
00438	Minolta Flash Meter S/N 445795		1
00439	Magnetic Drill Model: 10912		1

00440	Brown & Sharpe Digital Elec 6" Vernier Caliper S/N:200575		1
00441	RCA Selectavision VHS Videorecorder		1
00442	Computer-l S/N: WF54005599 PDP 11/73		1
00443	Computer-2 S/N: WF54005600 PDP 11/73		1
00444	Test Controllers S/N: BT00443		1
00445	Midwest Corp. Stand & Adapter Model #152-054		1
00446	Midwest Corp. 2KW Frensel Light Model #213-215		1
00447	Pelter Boom Mike ,S/N: 0290948 AMARC		1
00448	Pelter Boom Mike S/N: 0293010 AMARC		1
00449	Pelter Boom Mike S/N: 0290706 AMARC		1
00450	#1 Pedestal Fan		1
00451	#2 Pedestal Fan		1
00452	#3 Pedestal Fan		1
00453	Compudas Data Acquisition Sys. Model 7050E, S/N 61988		1
00454	Compudas Model #WY-75, S/N: 004103742 WYSE CRT Terminal Assy		1
00455	Gould 3800 Recorder S/N: 00183		1
00456	General Purpose Amplifier S/N: 00383		1
00457	Alta Group Inc. Pyxis Video System S/N: EQ665		1
00458	Torque Wrench-Ratchet Head 100-600 FT LB QJR600B		1
00459	Thomas Computers CDC Model #9883-91 Disk Pac S/N:C6108644		1
00460	Monsanto Chemical Pickering Tire Fluoroscope System		1
00461	Harris-Lanier Word Processing System Mainframe		1
00462	30 Amp Charger w/200 Amp Engine Crank		1
00463	Mavigraph Color Printer Model UP11OO, S/N 10107	1	
00464	Mavigraph Laminator Model UPK 1010, S/N 10098 - PART OF 00463 COST		1
00465	Greenlee Portable Bandsaw S/N WK2401-DH Model 1304C		1
00466	Fluke Digital Voltmeter S/N 43881143 Model 23		1
00467	Fluke Digital Voltmeter S/N 43881144 Model 23		1
00468	Hewlett Packard Logic Dev Station Support 02B MN 64100A SN 2444A07252		1
00469	HP 5 1/4" 14.8MB Winchester Disc Drive Model: 9134D S/N:2514A02517		1
00470	Vishay Straw Indicator Model BAM-l S/N 17285		1
00471	GEC Avionics Limited Monitor Sys S/N 8540K08860 (No. was #00433)		1
00472	Inframetrics System Model 525 Serial #6248	1	
00473	Panasonic Power Supply Model WV4050 S/N 62A01313		1
00474	Grant Engrg Inc LR-Series Inside Viewing Camera S/N 208		1
00475	Grant Engrg Inc Standard L-Ray Film Viewer S/N TV156676		1
00476	Grant Engrg Inc Automatic Film Processor S/N 871009		1
00477	Grant Engrg Inc Tire Prep. Station with Spreader S/N 102188		1
00478	Grant Engrg Inc Jib Crane & Hoist S/N LW-040GB		1
00479	Grant Engrg Inc Branick Tire Spreader Model N, S/N 88E803		1
00480	JR-3 Inc. Electronics for Robotics Force-Moment Sensor S/N 0248		1
00481	Schaevitz Angle-Star Protractor/Inclinometer S/N 81160008		1
00482	Midwest Comm. Corp. WV-CDllO Color Camera S/N 84B08490		1
00483	Midwest Comm. Corp. WV-CDllO Color Camera S/N 84B08422		1
00484	Midwest Comm. Corp. WV-7230B Tilt/Pan Head S/N 82000384		1
00485	Midwest Comm. Corp. WV-7230B Tilt/Pan Head S/N 72000495		1
00486	Midwest Comm. Corp. WV-7230B Tilt/Pan Head S/N 72000482		1
00487	Midwest Comm. Corp. WV-7230B Tilt/Pan Head S/N 72000477		1
00488	Midwest Comm. Corp. AG-1230 VHS Recorder S/N D8MC00899		1
00489	Midwest Comm. Corp. AG-1230 VHS Recorder S/N D8MC00896		1
00490	Midwest Comm. Corp. TVJ6AC-l Zoom Lens S/N 506-8E		1
00491	Midwest Comm. Corp. TVJ6AC-l Zoom Lens S/N 497-8E		1
00492	Midwest Comm. Corp. TVJ6AC-l Zoom Lens S/N 518-8E		1
00493	Midwest Comm. Corp. TVJ6AC-l Zoom Lens S/N 524-8E		1
00494	Midwest Comm. Corp. WV-7330 Tilt/Pan Controller S/N 82T01317		1

00495	Midwest Comm. Corp. WV-7330 Tilt/Pan Controller S/N 82T01318		1
00496	Midwest Comm. Corp. WV-7330 Tilt/Pan Controller S/N 72T00753		1
00497	Midwest Comm. Corp. WV-7330 Tilt/Pan Controller S/N 72T00759		1
00498	Midwest Comm. Corp. WV-CD130 Camera S/N 72A04205		1
00499	Midwest Comm. Corp. WV-CD130 Camera S/N 72A04201		1
00500	Midwest Comm. Corp. WV-CD130 Camera S/N 72A04207		1
00501	Midwest Comm. Corp. WVOCD130 Camera S/N 72A04191		1
00502	Bell & Howell Bridge Signal Cond. Modules & Channel Pkgs SN 4123		1
00503	Zenith 248/12 Computer Sys. 1 S/N: 830ED001049		1
00504	Flat Screen Monitor Model: ZCM1490-Z SN 820NM2063NOG		1
00505	ALPS Printer Model: ALQ300 S/N: 8D1200445Y		1
00506	Zenith 248/12 Computer Sys. 2 S/N: 830ED001065		1
00507	Flat Screen Monitor Mod. ZCM1490-Z S/N 820NM2127NOG	1	
00508	ALPS Printer Model: ALQ300 S/N: 8D1200447Y		1
00509	Fluke Digital Voltmeter Model: 77 S/N: 42450196		1
00510	Fluke Digital Voltmeter Model: 77 S/N: 42450195		1
00511	Zenith 248/12 Computer Sys 3 S/N 837EC000452		1
00512	Flat Screen Monitor Mod ZCM1490-Z S/N 831NB0293NOG (Part of 00511 cost)		1
00513	ALPS Printer Model: ALQ300 S/N: 8D1201227Y		1
00514	Hewlett-Packard Co. 3421A Data Acquisition Unit S/N: 2338A09627		1
00515	Microbot Robot S/N 1557 "FREDIA"		1
00516	Microbot System Controller, S/N 1020917		1
00517	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77528		1
00518	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77545		1
00519	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77549		1
00520	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77566		1
00521	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77571		1
00522	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77473		1
00523	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77578		1
00524	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77579		1
00525	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77580		1
00526	Stress Analysis Serv. Signal Conditioner Model: 2310VY SN: 77581		1
00527	Stress Analysis Serv. Rack Model: 2350Y SN: 78527		1
00528	Hewlett-Packard 41CV Scientific Calculator SN 2827S20319		1
00529	Sony RGB 13" Monitor Model PVM-1342Q SN 2000989		1
00530	Harris Corp. 4300 PC (Personal Computer) SN 50354		1
00531	Harris Corp. HR-19 Video Display Screen SN: 1997 (Part of 00530 cost)		1
00532	Harris Corp. PS-8 Laser Printer SN: 289262839 (Part of 00530 cost)		1
00533	Harris Corp. EF-12 Scanner SN: 521336 (Part of 00530 cost)		1
00534	Harris Corp. Lanier Mouse SN: LT 19885300 (Part of 00530 cost)		1
00535	Basic Computer Jet Printer Model HP3630A SN 2728A79943		1
00536	W. S. Electronics Laser Printer Model: LPX 600 SN: 86404188		1
00537	Applied Creative Tech Systemize + Network Sys Systemizer + 0 Mem. SN 9816		1
00538	Applied Creative Tech Systemize + Network Sys Systemizer + 0 Mem. SN 9815		1
00539	Applied Creative Tech Systemize + Network Sys Systemizer + 0 Mem. SN 9814		1
00540	Applied Creative Tech Systemize + Network Sys Systemizer + 0 Mem. SN 9803		1
00541	Applied Creative Tech Systemize + Network Sys Systemizer + 0 Mem. SN 9788		1
00542	Applied Creative Tech Systemize + Network Sys Systemizer + 0 Mem. SN 9791		1
00543	Applied Creative Tech Systemize + Network Sys Systemizer + 0 Mem. SN 9533		1
00544	Vivitar 365 Elec Flash S/N: 7081060		1
00545	Battery Pack Model: LUP 1 S/N: 7082959 (Part of 00544cost)		1
00546	Radio Shack Wireless PA Catalog # 32-1225		1
00547	Radio Shack Wireless PA Catalog # 32-1225		1
00548	Radio Shack MPA 90 S/N: 503506 Catalog #32-2024	1	
00549	Radio Shack FM Wireless Mike Catalog #32-1221		1

00550	Radio Shack FM Wireless Mike Catalog #32-1221	1
00551	Radio Shack Speaker - Model PA-95 Catalog #40-1411	1
00552	Radio Shack Speaker - Model PA-95 Catalog #40-1411	1
00553	Fluid Head for Bogen Tripod Model: 3063	1
00554	Decwriter III Hardcopy Terminal SN PN40986 Md LA120DA (ADPE #00 205975)	1
00555	LA 36 DK Decwriter S/N:WF-A1040	1
00556	Panasonic CC Color Camera S/N: 94A05110	1
00557	Sony CCD Video Camera S/N: 18241	1
00558	Sony CCD Video Camera S/N: 18242	1
00559	Decwriter III Hardcopy Terminal Model LA120-DA	1
00561	D 0 Industries DOZ-6x12.5MD3 motorized zoom lens S/N: 001	1
00562	D 0 Industries DOZ-6x12.5MD3 motorized zoom lens S/N: 001	1
00563	Panasonic Camcorder S/N F9HDOlllO M/N:AG-180	1
00564	SPS/1800 A Solar Battery Back-up sys. S/N:8808101	1
00565	VOM Simpson 260-8M S/N:3-714414	1
00566	Dayton Blueprint Co. Drawing Files Floor Rack	1
00567	RDP Corporation Textbook: Shock & Vibration Measurement Technology	1
00568	Ectron Corporation Thermocouple Calibration Model: llOOCF S/N 24541	1
00569	VHS Editing Recorder M/N: BR8600V Mfg:JVC S/N: 09519659	1
00570	EOS 700 Canon Camera W/35-80 Lens C S/N 1569293 L S/N 1402498	1
00571	Battery Charger Model: 2Z556D	1
00572	Measurements Group Stress A Model 2350Y RACK #1	
	SN: 086791 Model 2310YV Signal Conditioner	1
00573	SN: 086898	1
00574	SN: 088250	1
00575	SN: 086901	1
00576	SN: 088274	1
00577	SN: 086899	1
00578	SN: 088237	1
00579	SN: 088269	1
00580	SN: 086907	1
00581	SN: 086908	1
00582	SN: 086906	1
00583	Signal Conditioner RACK #2 SN: 086795	1
00584	SN: 086918	1
00585	SN: 086902	1
00586	SN: 088239	1
00587	SN: 088264	1
00588	SN: 088226	1
00589	SN: 088793	1
00590	SN: 088774	1
00591	SN: 088775	1
00592	SN: 088231	1
00593	SN: 088748	1
00594	Signal Conditioner RACK #3 SN: 08778	1
00595	SN: 086903	1
00596	SN: 086910	1
00597	SN: 088229	1
00598	SN: 086871	1
00599	SN: 086877	1
00600	SN: 086911	1
00601	SN: 086889	1
00602	SN: 086905	1
00603	SN: 088246	1
00604	SN: 088251	1

00605	Signal Conditioner RACK #4 SN: 086790		1
00606	SN: 086896		1
00607	SN: 088236		1
00608	SN: 088766		1
00609	SN: 088234		1
00610	SN: 088227		1
00611	SN: 088232		1
00612	SN: 086873		1
00613	SN: 086919		1
00614	SN: 086891		1
00615	SN: 086875		1
00616	S/N 666302 Model: 900 AUC Overhead Projector		1
00617	Canon Speedlite S/N: FD0500		1
00618	Omega Engr. Model HH21 Microprocessor Thermometer S/N: T55129		1
00619	Pro Spectra Camera		1
00620	Carpaint Company S/N 948496 Model: #7 Binks Spray Gun		1
00621	Material Flow, Inc. Cylinder Truck Model: 713127		1
00622	Heurikon Corp. VME System Includes: VME System Enc		1
00622A	Giesting & Assocs. Framer Grabber	1	
00622B	VME Microsystems Intl Digital IO Board		1
00622C	VME Microsystems Intl Analog Input Board	1	
00622D	VME Microsystems Intl Analog Output Board		1
00622E	Dolfuss-Root CPU Card 4MB Memory		3
00622F	Heurikon Corp Winchester Disk Drive		1
00622G	Vigra Inc. Graphics Board 4MB Video Memory		1
00623	Daytronics Corp Data Logger S/N 2260(3084)		1
	RGB Color Monitor S/N MC-00107859		1
00623A	Weigh-Tronix Printer 9600 S/N 154553 (used with Data Logger #2260)		1
00624	Daytronics Corp Data Logger S/N 2249(3084)		1
	RGB Color Monitor S/N MC-00107645		1
00624A	Weigh-Tronix Printer 9600 S/N:154554 (used with Data Logger #2249)		1
00625	S/N SAJ 03247 Canon Bubble Jet Printer		1
00626	S/N: 00400662 Mitsubishi Monitor		1
00627	Vibra Metrics, Inc. Amplifier/Integrator Model LP152-12		
	PN: 9353585 SN: 1128		1
	with 10 accelerometers:		
	SN: 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449		10
00628	Daytronics System:		
	10" Color Monitor SN: MC90802251		1
	Data Pac SN: 78841		1
	Keyboard SN:2479(5093)		1
00629	Car Paint Spray Gun Model 7 SN: 985161 Tank Model 81-350		1
00630	Daytronics Instrumentation System:		
	Data Pac: SN: 79840		1
	Color monitor SN: 324		1
	Track/Hold Controller SN: 616, 621, 624		3
	Assorted Support items & parts		
00631	Measurements Group C/O Stre Signal conditioners (Rack #l) SN: 102471		1
00632	SN: 100665		1
00633	SN: 100672		1
00634	SN: 102474		1
00635	SN: 100683		1
00636	SN: 102466		1
00637	SN: 102462		1
00638	SN: 102468		1

00639	SN: 102461	1
00640	SN: 102494	1
00641	rack # 2 SN: 102464	1
00642	SN: 100660	1
00643	SN: 102456	1
00644	SN: 100678	1
00645	SN: 102457	1
00646	SN: 10067,1	1
00647	SN: 100686	1
00648	SN: 100676	1
00649	SN: 100679	1
00650	SN: 100673	1
00651	rack # 3 SN: 100688	1
00652	SN: 102495	1
00653	SN: 102498	1
00654	SN: 102479	1
00655	SN: 100685	1
00656	SN: 102465	1
00657	SN: 102467	1
00658	SN: 102463	1
00659	SN: 102469	1
00660	SN: 102470	1
00661	rack #4 SN: 100674	1
00662	SN: 100677	1
00663	SN: 100684	1
00664	SN: 100668	1
00665	SN: 100670	1
00666	SN: 100667	1
00667	SN: 100664	1
00668	SN: 100680	1
00669	SN: 100663	1
00670	SN: 100687	1
00671	rack #5 SN: 102459	1
00672	SN: 100669	1
00673	SN: 100682	1
00674	SN: 102458	1
00675	SN: 100662	1
00676	SN: 102497	1
00677	SN: 102455	1
00678	SN: 102496	1
00679	SN: 102499	1
00680	SN: 102460	1
00681	Compaq Dyna Force Data Acquistion System:	
	Data Acquisiton System SN: 6239HBN20771	1
	Monitor: SN: 23614544M944	1
	Mouse: SN: 3538185	1
00682	K Systems Corp F-16 Data Analysis System:	
	Super Tower Case 250 W Power Supply SN: 0074885	1
	W/50 MHZ Mother Board/CPU 256K SN: 920700170	1
	NANAO 17" Flat Screen Super VGA Color Monitor SN:68079072	1
	NANAO 101 Enhanced Keyboard SN: 6311056138 ACER	1
00683	HP33449A Laser Jet Printer III SN: 3151JD5429	1
00684	Hewlett-Packard Modal Analysis System:	
	Monitor: (Model HP 98754A) SN: 3144J50864	1
	Keyboard: (Model 46021A) SN: 3217S52558)	1

	Disc Drive & Computer SN: H6229A82729H	1
	Mouse: SN: 3213520457	1
00685	Future NOW CAD System:	
	Futura/2000 Computer SN: 11370	1
	NANAO Monitor SN: 68887072-USM	1
	Keyboard: I.D. # 4004946	1
	Mouse: SN: 0020212	1
00686	MTS Coupon Control & Data Acquisition System:	
	Computer System SN: 92638	1
	Keyboard SN: M921291656	1
	Monitor #A000032445SHC	1
00687	HP Laserjet 4 Printer SN: USBC219581 Model: C2001A ADPE # 203410	1
00688	HP Laserjet 4 Printer SN: USBC227632 Model: C2001A ADPE # 203389	1
00689	HP Laserjet 4 Printer SN: USBC227637 Model: C2001A ADPE # 203444	1
00690	9"X16" Wilton Cut Off Bandsaw Model 7010 SN: 208852	1
00691	Measurements Group Inc Model 031 Basic Polariscope SN: 109301	1
00692	Measurements Group Inc Model 632 Digital Strain Indicator/Printer SN: 109302	1
00693	Measurements Group Inc Model 236 Stroboscopic System SN: 109303	1
00694	Measurements Group Inc Model 137 Telemicroscope SN: 109304	1
00695	Measurements Group Inc Model 012 Sheet Casting Kit SN: 109305	1
00696	Measurements Group Inc Model 011 Coating Application & Calib. SN: 109306	1
00697	Measurements Group Inc Model 013 Surface Preparation Kit SN: 109307	1
00698	Measurement Inst Electrohome Desk Top Monitor, Model ECM 14103 SN: 72231A077 (on shimmy controller)	1
00699	Rheometrics, Inc. Personal Computer Operator Station	
	SN: 37VML	1
	SN: 328B1121CV	1
	SN: 0802739	1
	Rheometrics RAA	
	SN: CA160	1
	SN: CG054	1
	SN: 41303308	1
00700	Hewlett-Packard VXI High Speed Collection/Reduction System:	
	SN: 3227A01988	1
	SN: 3301A00155	1
	SN: 3340M50929-KBD	1
	SN: KR30624587-MON	1
	SN: 3313A00486	1
	SN: 3221A03436 & 03437	2
	SN: 3330A00489	1
	SN: 3330A00490	1
	SN: US45003371	1
	SN: US45004670	1
00701	Hewlett-Packard VXI High Speed Collection/Reduction System:	
	SN: 3227A01715	1
	SN: 3301A00247	1
	SN: 3339M50124	1
	SN: KP32159894	1
	SN: 3313A00467	1
	SN: 3221A03204	1
	SN: 3221A03208	1
	SN: 333A00203	1
	SN: 3330A00202	1
	SN: US40003331	1
	SN: US42004580	1

00702	Sun Microsystems SPARC System:	
	Computer SN: 347F2104	1
	Monitor SN: 9341FC1115	1
	CD ROM SN: 346U4669	1
	Tape Drive SN: 346U2584	1
	SN: 9346799718	1
00702A	Parallax Graphics, Inc. Video Frame Grabber SN: 18339 & 18514	2
00703	MTS Environmental Chamber:	
	SN: 0183151	1
	SN: 475323-04D	1
	SN: 398777-08	1
	SN: 398777-09	1
00704	Sun Microsystems SPARC System:	
	Computer SN: 347F1848	1
	SN: 9315176537	1
	CD ROM SN: 344U2564	1
	SN: 347U1096	1
	SN: 9346732365	1
	Monitor SN: 9339FC2958	1
00705	Panasonic Camera Video Micro 1 Inch X 1.5 Inch W/Mounting Stand SN: 320747	1
	Cable, Meter, Wide Angle Lens, Telephoto Lens	1 ea
00706	Sun Microsystems SPARC System:	
	Computer SN: 438F3245	1
	Monitor SN: 9434FC2190	1
	SN: 434G2397	1
	Tape Drive SN: 438G0972	1
	SN: 090994A60006	1
	SN: 082494CB0169	1
00707	Sun Microsystems SPARC System:	
	Computer SN: 438F3324	1
	Monitor SN: 9434FC2194	1
	SN: 434G2452	1
	Tape Drive SN: 438G0987	1
	SN: 090994A60001	1
	SN: 082494CB0143	1
00708	Random Access Apple/Mac Quadra 630 SN: SXC4424BF3JY	1
	144+ Fax SN: A052500K372	1
	Apple Monitor SN: SCY4251HC1S2	1
	Apple Printer SN: CA420Q0071GJ	1
	Apple Keyboard SN:	1
00709	Industrial Video Mitsubishi S-RHS Hi-Fi Stereo VCR SN: 0002152	1
00710	Videonics Titlemaker SN: 235911	1
00711	Panasonic Color Video Camera SN: 48B07585	1
00712	Panasonic 6:1 Zoom Lens SN: 4063000207	1
00713	HP Laser Jet 4 Plus Printer - SN: USFC147497, Model: C2037A	1
00714	Sylvest Management System:	
	HP CPU Base - SN: 6507A50128	1
	HP Color Monitor - SN: JP023333	1
	8 GB Tape Drive DDS Drive W/Data Compression - SN: 3352E79924	1
	32 MB Total RAM (2 SIMMS), 2 GB Internal Disk Drive	1
00715	Hewlett-Packard Function Generator 15MHz, SN: US34009429	1
00716	Camera: Hitachi Black & White CCD SN: 5014507	1
	Calrad Power Supply #0594	1
	Tripod Adapter	1
00717	Toshiba T6600C 486DX2 Portable SN: 12416824	1

	Toshiba Noteworthy Fax Modem XJ2144	1
	Intelligent Instrumentation Multi-Function Board Kit: PC1-20428W-1 SN: 4528110662 & PC1-20429T-1	2
00718	Toshiba T6600C 486DX2 Portable SN: 12416835	1
	Toshiba Noteworthy Fax Modem XJ2144	1
	Intelligent Instrumentation Multi-Function Board Kit: PC1-20428W-1 SN: 4528110280 & PC1-20429T-1	2
00719	Meter, Scope; Fluke Model 92; SN: DM6460318	1
00720	UCR Pentium 100 Computer SN: 95645;	1
	Monitor SN: H3ND900996	1
00721	UCR Pentium 100 Computer SN: 95646;	1
	Monitor SN: H3NDC00031	1
00722	UCR Pentium 100 Computer SN: 95647;	1
	Monitor SN: H3NF600241	1
00723	UCR Pentium 100 Computer SN: 95644;	1
	Monitor SN: H3MD300793	1
00724	Kodak HSV-1000 High Speed Video System SN: 1518, PN#: 10002001-001	
	High Resolution Camera	1
	Camera Cables	1
	Monitor SN: 5140064	1
	Carrying Cases	1
	Cart With Built In VCR	1
	Tripod	1
	PN#:10002019-001	1
00724A	Kodak Gear Head, Lens Kit PN#: 1002519	1
	50 Meter Camera Cable PN#: 03000166-001	1
00725	DEC Laptop Battery Powered Computer Model #TS31D	1
	W/Modem Model # CC3288i	1
	Leather Case	1
	MS Office Windows 95-3	1
00726	DEC Laptop Battery Powered Computer Model #TS31D	1
	with Modem Model #CC3288i	1
	Leather Case	1
	MS Office Windows 95-3	1
00727	Shredmaster 1656S Document Shredder SN: IGO6505	1
00728	Lantronix EPS1/EPS2 Universal Print Server (no SN) (Bar Code 1445208)	1
00729	C3917A HP Laserjet 5M Printer SN: USH078249	1
00730	Ohaus Precision Standard Scales, Model TS400 (no SN)	1
00731	Snap-on Electrotork Torque Wrench, Model QCE225A SN: 06960005	1
00732	Digital Camera Model DC50 SN: EKA73801468	1
00733	Toshiba Satellite Pro 460CDT Laptop Cptr, Model PA1251UXCD, SN: Z7446740-3	1
00734	Toshiba Satellite Pro 460CDT Laptop Cptr, Model PA1251UXCD, SN: Z7446661-3	1
00735	IBM Think Pad Laptop Computer, Type 2365-5AU, SN: 78-AP553 97/10	1
00736	Mitsubishi Hi-Fi VCR, Model FS-U780 SN: 023610M	1
00737	SONY Video Color 14" Monitor, Model PVM-14M2U, SN: 2010231	1

TECHNICAL EXHIBIT 5 d

VEHICLES

VEHICLE NO.	DESCRIPTION	QUANTITY
97B979	Van	1
90B2334	Truck	1
94E580	Forklift 4K	1

85E1210	Forklift 6K	1
70E760	Electric crane	1

TECHNICAL EXHIBIT 5 e

FURNISHED FILES, DOCUMENTATION, AND REPORTS

Paper:

Test Reports
Test Data Files
Calibration Records
Shift Reports
Drawings:
    Vellum Reproducibles
    Copies
Purchase Requisitions
Task Order Files
14 day Vouchers
Test Article Inventory
Contractor Acquired Equipment and Materials
Mantenance Records

Electronic Media:

Test Reports
Test Data Files
Calibration Schedule
Shift Reports
Computer Aided Design Drawings
Hazardous Material Logs
Tape Backups of all of the above

Other media:

L-Ray Films, Video Tapes, Photographic Negatives and Prints

TECHNICAL EXHIBIT 6

QUALITY STANDARDS

(RESERVED)

TECHNICAL EXHIBIT 7

PERFORMANCE REQUIREMENTS TABLE FOR USE WHEN SURVEILLANCE IS BY RANDOM SAMPLING

(RESERVED)

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

GOVERNMENT FURNISHED FACILITIES (PWS 3.1.1.)
- BUILDING 20031 - QUARTERMASTER GENERAL DWG 6681
  - GROUND FLOOR LAYOUT - FACILITY D31FS-00031
    - CONTRACTOR OFFICES - FACILITY D31FS-00024
      - ROOMS 100, 101, 101A, 101B AND 102
    - CENTRAL OFFICES - FACILITY D31FS-00021
      - ROOMS 103, 104, 104A, 105, 106 AND 107
    - 120 DYNO (MOD) TEST AREA
      - CONTROL ROOM - ROOM 202
    - BALDWIN TEST AREA (3,000K) - BALDWIN 91133
    - BALDWIN TEST AREA (200K)
    - WELLMAN DROP TOWER TEST AREA
    - OPEN TIRE STORAGE TEST AREA
    - MOD BUILD-UP AREA
    - 192 DYNO TEST AREA
      - CONTROL CONSOLE
    - STUMP AREA - WHEEL & BRAKE BUILD-UP
    - 84 DYNO TEST AREA
      - CONTROL CONSOLE
    - SHIPPING AND RECEIVING AREA
    - 66 DYNO TEST AREA
      - CONTROL CONSOLE
    - HYDROSTATIC BURST TEST AREA
    - TIRE FORCE MACHINE TEST AREA
      - CONTROL CONSOLE
    - 168i DYNO TEST AREA
      - CONTROL ROOM
    - ELECTRICAL ROOM - ROOM 108
    - OIL STORAGE ROOM
    - EXTERIOR STORAGE AREA
    - RESTROOMS - ROOMS 105 AND 107
    - JANITOR CLOSET - ROOM 106
    - S.E. TOWER ROOM 109
  - SECOND FLOOR - D31FS-00033
    - N.E. TOWER
    - S.E. TOWER
    - CONTRACTOR OFFICES - FACILITY D31FS-00025
      - ROOMS 200, 200A, 200B, 200C AND 200D
    - GOVERNMENT OFFICES - FACILITY D31FS-00022
      - ROOMS 201, 201A, 201B AND 201C
  - THIRD FLOOR - D31FS-00034
    - N.E. TOWER - CTR AREA
    - S.E. TOWER - CTR AREA
    - FACILITY COMMUNICATION ROOM
    - GOVERNMENT MEZZ OFFICES - FACILITY D31FS-00023
      - ROOMS 301 THRU 320
  - FOURTH FLOOR - D31FS-00035
    - N.E. TOWER - CTR AREA
    - S.E. TOWER - CTR AREA

- BUILDING 20032 LAYOUT - SOUTH BAY - FACILITY D31FS-00032

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- BAY 1 - EAST
  - INSTRUMENTATION LAB
  - MAINTENANCE SHOP
  - MACHINE SHOP
- BAY 2 - EAST CENTRAL
  - L-RAY TEST AREA
  - OPEN MATERIAL STORAGE AREA
- BAY 3 - CENTER
  - STAGING/TEMPORARY STORAGE AREA
- BAY 4 - WEST CENTRAL
  - FATIGUE TEST AREA
- BAY 5 - WEST
  - SECURE STORAGE AREA

TESTING FACILITY EQUIPMENT (PWS 3.1.2)
- 120 INCH 350 MPH DYNAMOMETER (MOD)
  - HYDRAULIC SYSTEM (COMMON)
    - POWER SUPPLY SCHEMATIC - GILMORE D37383
    - HYDRAULIC LINES INSTALLATION - FACILITY E31FS-40500
    - PUMP ASSY - GILMORE R37221
      - PUMPS (4) - DELAVAN 28350, 720 SERIES (VARIABLE)
      - COUPLINGS (4) - FALK 70T-T20 (SPECIAL BORE ONE END)
      - MOTORS (4) - ALLIS-CHALMERS 365TS, 75HP, 1800RPM
      - RESERVOIR & PRE-CHARGE PUMP - FACILITY R31FS-42057
    - LINES/HOSES/COUPLINGS
  - ELECTRICAL POWER SYSTEM (COMMON)
    - CIRCUIT B4L (6.9KV)
    - TRANSFORMERS SPEC. - GILMORE ?37317
  - MOTOR DRIVE SYSTEM (COMMON)
    - MOTORS (3) - RELIANCE 9000AT, 1150HP, 980RPM
    - SCR UNITS - GILMORE D42944
  - ROAD WHEEL SYSTEM - ADAMSON 16251 & FACILITY D31FS-42262 (COMMON)
    - FLYWHEEL - ADAMSON 16252
    - PEDESTALS (2) - FLYWHEEL BEARINGS - ADAMSON 16253
    - DRIVE SHAFT - ADAMSON 16257
      - OPTICAL ENCODER - FACILITY C31FS-42249
    - BEARINGS (2) - SKF BRG NO. 23252K
    - COUPLINGS (3) - ZURN F108
  - TIRE TEST CARRIAGE SOUTH - GILMORE DWG R37014 & FACILITY R31FS-40753
    - ACCUMULATORS (4) - GREER A106-200
    - SCHEMATIC (PNE. HYD. & ELECT) FACILITY E31FS-42024
    - RADIAL RAM ASSY - GILMORE R37036
      - ACTUATOR (UPPER) - GILMORE R37244
      - ACTUATOR (LOWER) - FACILITY E31FS-40719
      - POSITION SENSOR
        - SENSOR - TEMPOSONIC DCTM-24
        - MAGNET RING - TEMPOSONIC 201553
      - BEARINGS - SCULLEY-JONES TYCHOWAY 21308
      - SERVO-CONTROL VALVES - MOOG SERIES 79 400GPM
        - PILOT VALVE - MODEL 73-104A (40MA 80OHM COILS)
      - LIMIT SWITCH - MICRO-SWITCH BZV6-2RQ

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- YAW ACTUATOR ASSY - FACILITY R31FS-40710
  - POSITION SENSOR - FACILITY D31FS-40734
    - ANGULAR DISPLACEMENT TRANSDUCER
    - TRANS-TEK, INC 603.000
  - ACTUATOR (2) SPEC. CONTROL - FACILITY D31FS-40718
  - SERVO-CONTROL VALVES - MOOG MODEL 72-103 (60GPM)
- CAMBER MOTOR ASSY - GILMORE R37032
  - MOTOR - HOUDAILLE CAT #47A1867SIT
  - SERVO-CONTROL VALVES - MOOG MODEL 72-103
  - ACCUMULATOR - GREER MODEL APB-30-10, P/N A66490-200
  - PIVOT BEARING - TIMKEN JHM522610 (CUP), JHM522649 (CONE)
  - POSITION SENSOR
    - LVDT - SCHAEVITZ 3000HR
- DISC MANDREL BRAKE - GILMORE D37005
  - CALIPER (3) - TOL-O-MATIC MODEL HP-20 DR
- METRICAL FRAME & YOKE- GILMORE R37018
  - Lz1 & Lz2 - GILMORE C37067
    - LOAD CELLS - BALDWIN U3L2 100K
  - Ly - GILMORE D37066
    - LOAD CELL - BALDWIN U3L2 75K
  - Lx1 & Lx2 - GILMORE D37065
    - LOAD CELLS - BALDWIN U3L2 50K
  - Lz3 - FACILITY D31FS-42341
    - LOAD CELL - SENSOTEC 41 20K
- CALIBRATION FIXTURE - FACILITY E31FS-42365
- MANDREL CARRIER SYSTEM
  - MONORAIL - MATERIAL HANDLING SYSTEM - GILMORE R37330
    - STATION SWITCH ASSEMBLY - GILMORE R37059
    - TRACK LAYOUT - GILMORE R40026
  - CARRIERS ("A" & "B") - GILMORE R40523
  - HANDLING SYSTEM SCHEMATIC - GILMORE D38675
  - INTERCONNECTION SCHEMATIC - D31FS-41213
  - POSITION SENSORS
  - BUILD-UP HOIST
- CONTROL SYSTEM
  - CONSOLE
  - HP-VXI COMPUTER
  - SOFTWARE
- TIRE STATION SUPPORT STANDS - GILMORE R40522
  - HOT SOAK CHAMBER - FACILITY E31FS-42062
    - CONTROLS -
  - COLD SOAK CHAMBER - FACILITY D31FS-41120
    - CONTROLS - FACILITY C31FS-40244
  - COOLING STATIONS ARRANGEMENT - GILMORE D37167
- MOD TEST SUPPORT EQUIPMENT
  - BEAD BREAKER - FACILITY D31FS-41097
  - BUILD-UP STANDS - FACILITY D31FS-41000
  - 15K MANDRELS - GILMORE R41865
    - JOURNAL L.H. - GILMORE 41968
    - JOURNAL R.H. - GILMORE 41967
    - MANDREL - GILMORE R41966

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

BEARING SHAFT L.H. - GILMORE C41965
BEARING SHAFT R.H. - GILMORE C41964
BEARINGS (4) - TIMKEN 59200 (CONE), 59412 (CUP)
LOCKNUTS (2) - TIMKEN N10
LOCKWASHERS (2) - TIMKEN W10

50K MANDRELS (STUB SHAFTS) - FACILITY E31FS-42283
JOURNAL L.H. - GILMORE 43006
JOURNAL R.H. - GILMORE 43005
MANDREL - FACILITY E31FS-42282
BEARING SHAFT L.H. - GILMORE C43003
BEARING SHAFT R.H. - FACILITY D31FS-42281
BEARINGS INBOARD (2) - TIMKEN 6466 (CONE), 6420 (CUP)
BEARINGS OUTBOARD (2) - TIMKEN 6460 (CONE), 6420 (CUP)
LOCKNUTS (2) - TIMKEN N14
LOCKWASHERS (2) - TIMKEN W14

50K MANDRELS (THRU) - FACILITY E31FS-42152
JOURNAL L.H. - GILMORE 43006
JOURNAL R.H. - GILMORE 43005
MANDREL - FACILITY E31FS-42154
BEARINGS INBOARD (2) - TIMKEN 6466 (CONE), 6420 (CUP)
BEARINGS OUTBOARD (2) - TIMKEN 6460 (CONE), 6420 (CUP)
LOCKNUTS (2) - TIMKEN N14
LOCKWASHER (2) - TIMKEN W14

80K MANDRELS - FACILITY E31FS-42263 (USES 15K BARRELS)
JOURNAL L.H. - GILMORE 43633
JOURNAL R.H. - GILMORE 43632
MANDREL - FACILITY E31FS-42264
BEARING L.H. (2) - TIMKEN 71412 (CONE), 71750 (CUP)
BEARING R.H. (2) - TIMKEN HM624749 (CONE), 624710 (CUP)
LOCKNUT L.H. - TIMKEN TAN21
LOCKWASHER L.H. - TIMKEN TW121
LOCKNUT R.H. - TIMKEN TAN24 (MODIFIED)
LOCKWASHER R.H. - TIMKEN TW124

100K MANDRELS (STUB SHAFTS) - FACILITY E31FS-42069
JOURNAL L.H. - GILMORE 43633
JOURNAL R.H. - GILMORE 43632
MANDREL - FACILITY F31FS-42280
BEARING SHAFT L.H. - FACILITY D31FS-42071
BEARING SHAFT R.H. - FACILITY D31FS-42068
BEARINGS (4) - TIMKEN HM624749 (CONE), 624710 (CUP)
LOCKNUT L.H. - TIMKEN TAN24
LOCKNUT R.H. - TIMKEN TAN24 (MODIFIED)
LOCKWASHERS (2) - TIMKEN TW124

100K MANDRELS (THRU) - FACILITY E31FS-42103
JOURNAL L.H. - GILMORE 43633
JOURNAL R.H. - GILMORE 43632

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- MANDREL - FACILITY E31FS-42100
- BEARINGS (4) - TIMKEN HM624749 (CONE), 624710 (CUP)
- LOCKNUT L.H. - TIMKEN TAN24
- LOCKNUT R.H. - TIMKEN TAN24 (MODIFIED)
- LOCKWASHERS (2) - TIMKEN TW124

MANDREL STORAGE RACK - FACILITY F31FS-40782
BARRELS - FACILITY D31FS-40196
FLANGES - FACILTY D31FS-40198
LOCK-RING REMOVAL TOOL - D31FS-42410
FLAT PLATE CONVEYOR SYSTEM - FACILITY E31FS-40266
SAFETY-WALK APPLICATOR - FACILITY E31FS-42400
TALC DISPENSING & VACUUM SYSTEM - FACILITY D31FS-40540
- DISPENSER - TECWEIGH E-5
- VACUUM - INVINCIBLE 6151P

TIRE SLIP TEST FIXTURE - FACILITY D31FS-42300
TIRE TEST CARRIAGE NORTH - R16298
RAM ASSY - FACILITY D31FS-40640
ACTUATOR - FACILITY D31FS-40648
MANIFOLD - FACILITY D31FS-40647
ACCUMULATOR (PRESSURE) - GREER A105-200 (5GAL)
ACCUMULATOR (RETURN) - GREER A104-200 (2 1/2GAL)
BLOWER DUCT - FACILITY D31FS-41208
SUPPORT EQUIPMENT
TORQUE ARM - FACILITY F31FS-40962
1681 TIRE TEST DYNAMOMETER - MTS D523073
FRAME ASSY - MTS D523060
ENCLOSURE - MTS 526875
ELECTRICAL POWER SYSTEM
COOLING DUCT - MTS 526149
MOTOR DRIVE SYSTEM - GEL ALSTHOM 4500 HP, 500 RPM
HYDRAULIC SYSTEM
PUMPS
MOBIL DTE-25 OIL
ACCUMULATORS
LINES/FLEX HOSES/COUPLINGS
SERVO-CONTROL VALVES
ACTUATORS
AIR-COOLING RADIATORS
ROAD WHEEL SYSTEM - MTS D523066
RIM/HUB ASSY - MTS D523068
DRIVE SHAFT - MTS D511532
BEARINGS
MOTOR COUPLING
WEST CARRIAGE (150K)
RADIAL ACTUATOR - MTS D517904
LOAD TRANSDUCER - MTS 527836
CAMBER FRAME - MTS D517901
ACTUATOR - MTS D525648
YAW ACTUATOR - D524968
EAST CARRIAGE (50K)
RADIAL ACTUATOR - MTS D526715

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- LOAD TRANSDUCER - MTS 535276
- CAMBER FRAME - MTS D526720
  - ACTUATOR - MTS D525648
- YAW ACTUATOR - D524968

SUPPORT EQUIPMENT
- BUILD-UP STAND - MTS D532021
- CALIBRATION - MTS D526137
- FLYWHEEL INSERTS

STRUCTURAL SUPPORT/CONTAINMENT SYSTEM

CONTROL SYSTEM
- CONSOLE TERMINAL
- COMPUTER
- DATA ACQUISITION SUBSYSTEM
- SOFTWARE

DUST COLLECTION SYSTEM

TEST ASSEMBLY HOIST/POSITIONING SYSTEM

ENVIRONMENTAL CHAMBER SYSTEM

192 INCH BRAKE TEST DYNAMOMETER

CONTROL SYSTEM (COMMON)
- CONSOLE
- COMPUTER - 8088 STD-BUSS
- SOFTWARE - PROGRAM C & 8088 PROGRAM LANGUAGE

ELECTRICAL POWER SYSTEM (COMMON)
- STRAIGHT LINE AC - ADAMSON 6467-2
- PATHEAD FOR SYNCHRONOUS MOTOR - ADAMSON 6560-1
- TRANSFER PANEL - ADAMSON 6688
- D.C. PANEL CONTROL - ADAMSON 7581
- POWER DISTRIBUTION BLOCK DIAGRAM - FACILITY D31FS-50058
- CIRCUIT B4K
- LIGHTING, TEST CAGE - FACILITY D31FS-50055

ROADWHEEL SYSTEM - ADAMSON 6255-CS (COMMON)
- POWER SUPPLY - FACILITY C31FS-50053, D31FS-50054
- CIRCUIT - CONTROL CENTER - FACILITY D31FS-50064
- BLOWER - FACILITY E31FS-50511
- MOTOR - WESTINGHOUSE 9-B-2799
- FLYWHEEL - ADAMSON 6406
- PEDESTALS FOR FLYWHEEL BEARINGS - ADAMSON 6447
- PILLOW BLOCKS - ADAMSON 6416
- DRIVE SHAFT - ADAMSON 6414
- BEARINGS (2) - SKF 23292K-C3
- INERTIA PLATES ADAMSON 6409 & 6410
- SEGMENTS
- PLATE RETAINER, BOLTS AND NUTS - ADAMSON 6448
- PLATE CHANGER INSTALLATION - FACILITY D31FS-50220

PNEUMATIC SYSTEM - ADAMSON 6465-5 (COMMON)
- UP-GRADE FACILITY E31FS-50120

HYDRAULIC SYSTEM (COMMON)
- SCHEMATIC - FACILITY F31FS-50140
- STATIC PULL AND EMERGENCY BRAKE SCHEMATIC - 6476-6
- BRAKE PUMP/RESERVOIR INSTALLATION - D31FS-50141
  - SCHEMATIC - FACILITY B31FS-50243

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

TIRE/WHEEL/BRAKE TEST CARRIAGE SOUTH - ADAMSON 6658 A THRU C
- APPLICATOR CYLINDER - ADAMSON 6527
- TORQUE ARM - ADAMSON 6659
- FUTURE → HYDRAULIC CONVERSION - FACILITY E31FS-50230
  - RAM CYLINDER SPEC CONTROL - FACILITY D31FS-50231
- TORQUE SYSTEM - ADAMSON 6659
  - MODIFICATION - FACILITY D31FS-50240
- BRAKE SYSTEM - FACILITY F31FS-50029
- TIRE PRESSURE CONTROL - FACILITY D31FS-50036

TIRE/WHEEL/BRAKE TEST CARRIAGE NORTH - ADAMSON 6285-1
- FUTURE → HYDRAULIC CONVERSION - FACILITY E31FS-50250
  - RAM CYLINDER SPEC CONTROL - FACILITY D31FS-50251
- TORQUE SYSTEM - FACILITY D31FS-50240
- BRAKE SYSTEM - FACILITY F31FS-50039
- TIRE PRESSURE CONTROL - FACILITY D31FS-50044

OMPTM ASSEMBLY - FACILITY D31FS-50520
- RAM CYLINDER SPEC CONTROL - FACILITY D31FS-50251

DOOR/SERVICE PLATFORM - D31FS-50506
- ACTUATOR - PARKER 4BB-2AUS23AC
- HYDRAULIC SCHEMATIC - D31FS-50516

TEST SUPPORT EQUIPMENT
- TV MONITOR - E31FS-50085
- THERMO-GRAPHIC TEST
- OFF-ROAD TIRE SLING (128") - C31FS-50107

OVERHEAD MOTION PLATFORM LANDING GEAR TEST MACHINE

84 INCH BRAKE TEST DYNAMOMETER

CONTROL SYSTEM
- CONSOLE
- 486 STD-BUSS COMPUTER, 100MHz
- SOFTWARE

ELECTRICAL POWER SYSTEM

MOTOR DRIVE SYSTEM
- POWER SUPPLY - FACILITY A31FS-30012, D31FS-30013 & E31FS-30017
- CIRCUIT - CONTROL CENTER - FACILITY
- BLOWER - FACILITY

ROADWHEEL SYSTEM - ADAMSON 10075
- WIRING DIAGRAM - ADAMSON 10079, FACILITY D31FS-30002

SOUTH CARRIAGE - ADAMSON 10081
- HYDRAULIC CONVERSION - FACILITY E31FS-30014
  - RAM CYLINDER - FACILITY D31FS-30015
    - LOAD CELL - INTERFACE 1032 - 50K
    - SERVOVALVE - MOOG 72-103
  - ACCUMULATORS
    - PRESSURE - GREER A105-200 - 5 GAL (2 REQD)
    - RETURN - GREER A104-200 - 2.5 GAL
- POSITION SENSOR - D31FS-31030
  - SENSOR - BALLUFF BTL2-G11-0914-Z-S32
  - MAGNET RING - BALLUFF BTL-Z-P-1013-4R
- TORQUE LOAD CELL - INTERFACE 1010 - 10K

NORTH CARRIAGE - ADAMSON 10116
- HYDRAULIC CONVERSION - FACILITY E31FS-30047

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- RAM CYLINDER - FACILITY D31FS-30051
  - LOAD CELL - INTERFACE 1020 - 12.5K
  - SERVOVALVE - MOOG 72-103
  - ACCUMULATORS
    - PRESSURE - GREER A105-200 - 5 GAL
    - RETURN - GREER A104-200 - 2.5 GAL
- POSITION SENSOR- D31FS-31040
  - SENSOR - BALLUFF BTL2-G11-0610-Z-S32
  - MAGNET RING - BALLUFF BTL-Z-P-1013-4R
- TORQUE LOAD CELL - INTERFACE 1010 - 1K

66 INCH BRAKE TEST DYNAMOMETER
- CONTROL SYSTEM
  - SCHEMATIC - C31FS-20009
  - CONSOLE
- TEST WHEEL BRAKE SYSTEM - FACILITY D31FS-20094
- ELECTRICAL POWER SYSTEM
- MOTOR DRIVE SYSTEM - FACILITY D31FS-20075
  - CONTROL SCHEMATIC - D31FS-20012
  - POWER SUPPLY
  - CIRCUIT - FACILITY D31FS-20077
  - CONTROL CENTER
- ROADWHEEL SYSTEM
- CARRIAGE
  - HYDRAULIC CONVERSION - FACILITY D31FS-20080
    - RAM CYLINDER - PRINCE (McMASTER CARR) 4Z448
      - LOAD CELL - INTERFACE SSM-5000
      - SERVOVALVE - MOOG 760
    - ACCUMULATOR - GREER A104-200
  - POSITION SENSOR
    - SENSOR - TEMPOSONIC DCTM-36-I
    - MAGNET RING - TEMPOSONIC 201553
  - TORQUE LOAD CELL - INTERFACE 1010 - 1K

TIRE FORCE MACHINE (TFM) - FACILITY E31FS-81000
- ELECTRICAL POWER SYSTEM
- HYDRAULIC POWER PACK - E31FS-81052
- TABLE - D31FS-81008
  - ACTUATOR - D31FS-81007
    - MILLER MODEL H72B (6' BORE X 216" STROKE X 4" ROD DIA., 3000 PSI SEVERE SERVICE RATING))
  - SERVO-CONTROL F31FS-81110
    - SERVO VALVE - MOOG 72-103B
    - ACCUMULATORS
      - PRESSURE - GREER F3-A1-1050-20 - 5 GAL
      - RETURN - GREER A108-200 - 1 PINT
  - POSITION SENSOR - D31FS-81290
    - SENSOR - TEMPOSONIC TTSRCU2160
    - MAGNET RING - TEMPOSONIC 201553
- RAM WHEEL LOADING - E31FS-81012
  - ACTUATOR
    - MILLER MODEL H82B (6' BORE X 21" STROKE X 2 1/2" ROD DIA., 3000 PSI SERVICE RATING))

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- POSITION SENSOR
  - LVDT - SCHAEVITZ 10,000 HR
- METRICAL FRAME & YOKE - FACILITY E31FS-81039
  - Lz1 & Lz2
    - LOAD CELLS - INTERFACE 1220 50K
  - Lz3, Lx1, Lx2 & Ly
    - LOAD CELLS - INTERFACE 1220 25K
- CONTROL SYSTEM
- SUPPORT EQUIPMENT
  - ROTARY TABLE - D31FS-81222
    - ACTUATOR
      - MILLER H84B (4" BORE X 28" STROKE 2 1/2" ROD DIA., 3000 PSI SERVICE RATING))
  - ROLLING RELAXATION TEST - D31FS-81260
    - ACTUATOR
      - LYNAIR H-6D02 (6" BORE X 29" STROKE 2 1/2" ROD DIA., 3000 PSI SERVICE RATING))

FATIGUE TEST MACHINE - FACILITY E31FS-63000

- ELECTRICAL POWER SYSTEM
- HYDRAULIC POWER PACK
  - MOTOR - LINCOLN, FRAME 444T, 100HP, 1185 RPM
  - PUMP - DENISON, P46V-01P-103-2-R01-1A04
  - CONTROLS - THE SHARP CONTROLS Co. MODEL 085-10044

DROP TOWERS

- TOWER #1 - WELLMAN 86870
  - DROP HEAD 1350-3600 LBS - WELLMAN 87743
  - DROP HEAD 660-3600 LBS - FACILITY D31FS-75370
- TOWER #2 - WELLMAN 86880
  - DROP HEAD 3600-10,300 LBS - WELLMAN 87599
  - DROP HEAD 1956-10,300 LBS - FACILITY D31FS-75400
- TOWER #3 - WELLMAN 86890
  - DROP HEAD 5,000-35,000 LBS - FACILITY E31FS-75237
    - BRAKE - FACILITY E31FS-75219
- TOWER #4 - WELLMAN 86900
  - DROP HEAD 35,000-150,000 LBS - WELLMAN 87597
- SUPPORT EQUIPMENT
  - SHOT ELEVATOR - FACILITY E31FS-75189
    - VALVE / ACTUATOR - FACILITY E31FS-75152
    - WIRING DIAGRAM - FACILITY D31FS-75094
  - SPIN-UP RIG - FACILITY D31FS-00392 (USAF DWG X54D757)
    - DRIVE ISOLATION TRANSFORMER - SYLVANIA 123-LQ3
    - MOTOR CONTROL SCHEMATIC - FACILITY D31FS-00292
    - CONTROL CABINET SCHEMATIC - E31FS-00293
  - LOAD TABLE 40K - FACILITY F31FS-75041
  - LOAD TABLE 8K - FACILITY D31FS-75410
  - LOAD TABLE 200K
  - REACTION PLATFORM 15.5 X 21.75 - FACILITY E31FS-75327
  - REACTION PLATFORM 39.5 X 48 - FACILITY E31FS-70160
  - RAMP 4 DEGREES - FACILITY D31FS-70168
  - RAMP 5 DEGREES - FACILITY D31FS-75345
  - RAMP 12 DEGREES - FACILITY D31FS-75343

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- RAMP 12.5 DEGREES - FACILITY D31FS-75303
- RAMP 14 DEGREES - FACILITY D31FS-75359
- RAMP 0-20 DEGREES - FACILITYD31FS-75353
- WING LIFT
  - LIFT CYLINDER - LYNAIR H-6D02 (6" BORE X 29" STROKE 2 1/2" ROD DIA.)
  - LIFT CYLINDER - LYNAIR HY-MF2 (6" BORE X 42" STROKE 2 1/2" ROD DIA.)

- LOAD APPLICATOR 200K - BALDWIN
  - SUPPORT EQUIPMENT
    - TIRE BRUISE TEST FIXTURE - FACILITY D31FS-70153
    - STATIC SCALED WHEEL TESTER - FACILITY D31FS-73010
- LOAD APPLICATOR 3,000K - BALDWIN 91133
  - SUPPORT EQUIPMENT
    - PLATEN INSTALLATION - FACILITY D31FS-70180
    - WHEEL LOAD TEST FIXTURE - FACILITY D31FS-70088
    - REACTION PLATFORM 39.5 X 48 - FACILITY E31FS-70160
    - CALIBRATION FIXTURE - FACILITY C31FS-40154
    - SIDE LOAD SET-UP - FACILITY E31FS-70162
    - FUTURE → MOD MANDREL ADAPTER - FACILITY D31FS-70190
- TIRE COUPON TESTER - MTS 810
  - GRIP ASSEMBLY - FACILITY D31FS-61003
  - SHEAR GRIPS ASSY - FACILITY D31FS-61013
- L-RAY AIRCRAFT TIRE ANALYZER - GRANT
  - ELECTRICAL SYSTEM
  - PNEUMATIC SYSTEM
  - CONTROL SYSTEM
  - LASER SYSTEM
  - COOLING UNIT - ELECTRO IMPULSE
- COMMON TEST SUPPORT EQUIPMENT
  - TIRE BALANCER - FACILITY E31FS-00455 (MICRO-POISE #E-11-11131)
    - ELECTRICAL DIAGRAM - FACILITY D31F-00456 (MICRO-POISE #D-49-1795)
    - PNEUMATIC DIAGRAM - FACILITY C31FS-00458 (MICRO-POISE #C-11-11083)
  - TIRE MOUNT/DISMOUNT MACHINE - SRL D788-0310
  - JIB CRANE (STUMP AREA) - FACILITY D31FS-41108
  - MTS GROUND LOADS SIMULATOR - FACILITY E31FS-00462
    - MTS ANALOG CONTROLLER
  - HYDRAULIC POWER PACKAGE 140 GPM 3,000 PSI
  - HYDRAULIC POWER PACKAGE 90 GPM 3,000 PSI
  - LIQUID NITROGEN DEWARS
  - BOTTLED COMPRESSED NITROGEN
  - INSTRUMENTATION AND SENSORS
  - PHOTO STRESS EQUIPMENT
  - MODAL STRESS EQUIPMENT
  - HIGH SPEED VIDEO RECORDER
  - COMPRESSED AIR SYSTEM
    - COMPRESSOR - INGERSOL SSR-EP25U
      - OPERATING PRESSURE 125 PSI

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- COMPRESSOR - INGERSOL (OLD)
- AIR DRYER - ULTRA AIR UA 200/C
- AIR DISTRIBUTION SYSTEM

MACHINE SHOP TOOLS AND EQUIPMENT
- MILL - BRIDGEPORT
- BANDSAW - DOALL
- DRILL PRESS - EDLUND
- HYDRAULIC PRESS - K.R.WILSON
- BENCH GRINDER, 3/4 HP - SEARS 931000010
- GRINDER/BUFFER - BALDORA A-559-343
- GRINDER 10" - UNITED STATES ELECTRIC TOOL
- CUT-OFF SAW - W.F.WELLS & SONS MODEL F-15, 15" X 17"
- LATHE - HENDEY 16 X 78
- LATHE - CINCINNATI 13 X 36
- LATHE - LeBLOND 13 X 24
- CUTTING TOOLS

MAINTENANCE TOOLS AND EQUIPMENT
- CUT-OFF SAW - WILTON
- SHEET METAL BRAKE - DREIS & KRUMP MODEL W-36 6FT X 14 GA.
- PIPE THREADER - RIDGID 535
- WELDER - HOBART
- CUTTING TORCH
- GRINDER - BLACK & DECKER
- DRILL PRESS - SEPP??
- BANDSAW - DELTA
- SANDER/BRUSH - DELTA
- BELT SANDER/GRINDER - GENERAL ELECTRIC TYPE AG4
  - DUST COLLECTOR - TORIT MODEL 54
- FLOOR SCRUBBER
- CANISTER VACUUM
- UPRIGHT VACUUM
- UPRIGHT CARPET SHAMPOO CLEANER

GOVERNMENT FURNISHED MATERIALS)PWS 3.1.3 - REF TECH EXHIBIT 5C)

CONTRACTOR PROVIDED SERVICES (PWS)

GENERAL REQUIREMENTS (PWS)
- PERSONNEL (PWS 1.2)
  - CONTRACT MANAGER (PWS 1.2.1)
  - CONTRACTOR EMPLOYEES (PWS 1.2.2)
  - SECURITY (PWS 1.2.3)
  - TRAINING (PWS 1.2.4)
  - MEETINGS (PWS 1.2.5)
- QUALITY CONTROL (PWS 1.3)
- QUALITY ASSURANCE (PWS 1.4)
- PHYSICAL SECURITY (PWS 1.5)
- HOURS OF OPERATION (PWS 1.6)
- CONSERVATION OF UTILITIES (PWS 1.7)
- RECORDS (PWS 1.8)
- ENVIROMENTAL CONTROLS (PWS 1.9)
- SAFETY (PWS 1.11)

TECHNICAL EXHIBIT 8
PROGRAM WORK BREAKDOWN STRUCTURE
LANDING GEAR DEVELOPMENT & TEST FACILITY OPERATIONS

- ORIENTATION (PWS 1.12)
- PHASE OUT (PWS 1.13)
- TECHNICAL REQUIREMENTS (PWS 5.0)
  - OPERATIONAL AND MAINTENANCE SERVICES (PWS 5.1)
    - PROJECT MANAGEMENT AND ADMINISTRATION (PWS 5.1.1)
    - SCIENTIFIC AND ENGINEERING SERVICES (PWS 5.1.2)
    - FACILITY MAINTENANCE SERVICES (PWS 5.1.3)
    - MATERIALS AND SUBCONTRACTING (PWS 5.1.4)
  - TECHNICAL REQUIREMENTS (PWS 5.0) CONTINUED)
    - TASK-ORDERED SERVICES (PWS 5.2)
      - TASK ASSIGNMENT PROCESS (PWS 5.2.1)
      - TEST PROGRAM SUPPORT (PWS 5.2.2)
      - ENGINEERING STUDIES (PWS 5.2.3)
      - SPECIAL PROJECTS (PWS 5.2.4)
      - FACILITY UPGRADING (PWS 5.2.5)
      - TASK ORDER MANAGEMENT (PWS 5.2.6)
    - MOBILITY DEPLOYMENT/DISASTER PREP/EXERCISES (PWS 5.3)
    - SERVICES DURING CRISES DECLARED BY NCA (PWS 5.4)
    - SURGE REQUIREMENT CAPABILITIES (PWS 5.5)

CONTRACT DATA REQUIREMENTS (TECHNICAL EXHIBIT 4)

GOVERNMENT FURNISHED SERVICES (PWS 3.2)
- UTILITIES (PWS 3.2.1)
  - ELECTRICITY
  - WATER
  - SEWAGE
  - STEAM
- POSTAL SERVICE (PWS 3.2.2)
- TELEPHONE SYSTEM (PWS 3.2.3)
- CUSTODIAL SERVICE (PWS 3.2.4)
- REFUSE COLLECTION (PWS 3.2.5)
- REAL PROPERTY MAINTENANCE (PWS 3.2.6)
- BASE CIVIL ENGINEERING (PWS 3.2.7)
- EMERGENCY MEDICAL SERVICE (PWS 3.2.8)
- SECURITY FORCES (PWS 3.2.9)
- ADPE AND NETWORK ACCESS (PWS 3.2.10)
- TRANSPORTATION (PWS 3.2.11)
- PROPERTY DISPOSAL (PWS 3.2.12)

GOVERNMENT VEHICLES (PWS 3.3)
- VAN
- TRUCK
- FORKLIFT 4K
- FORKLIFT 6K
- MANLIFT
- CUSHMAN CART 3-WHEEL
- CUSHMAN CART 4-WHEEL
- ELECTRIC CRANE
- MAINTENANCE (PWS 3.3.1)
- FUELS (PWS 3.3.2)